# SANYO

# Service Manual      Stereo Sound System  DCX801   (W.GERMANY)
(ITALY)



## Specifications

**Tuner section**

Frequency range ......    FM : 87.5 - 108 MHz
MW : 522 - 1,611 kHz(W.GERMANY)
526.5 - 1,606.5 kHz(ITALY)
LW : 144 - 290 kHz(W.GERMANY)
148.5 - 283.5 kHz(ITALY)

**Cassette Deck section**

Recording system .....    AC bias, 4-track stereo
Erasing system ........    Magnet erase, 2-track
Rewind and fast
forward time .......    Approx,120 sec. (C 60)

**CD player section**

Channels .............    2 channels
Frequency response ...    20 - 20,000 kHz
Channel separation ...    90 dB (1 kHz)
Distortion ...........    0.12 % (1 kHz)
Wow and flutter .....    Undetectable
GeneralS/N ratio ...    85 dB
Output power ........    40 W × 2 (at 8 ohma,10%
distortion)

Inputs ...............    VIDEO : 47k ohms (280 mV)
outputs .............    Speakers : 8 ohms
Headphones : 8 ohms
Power source .........    AC : 220V, 50Hz

Dimensions
(approx.) ...........    360 × 328 × 357 mm
(W × D × H)
Weight(approx.) ......    4.2 kg including batteries
RB-X801 Remote control
Power source .........    DC : 3 V "R6/HP 7" battery,× 2
Dimensions
(approx.) ...........    60 × 18 × 160 mm
(W × D × H) wer source

REFERENCE No. WM-580494

pecification subject to change without notice.

## LASER BEAM SAFETY PRECAUTIONS

Do not look directly at the laser beam coming from the pick-up or allow it to strike against your fingers, skin, etc.
Do not apply power if there is a broken part in the laser output section of the pick-up.
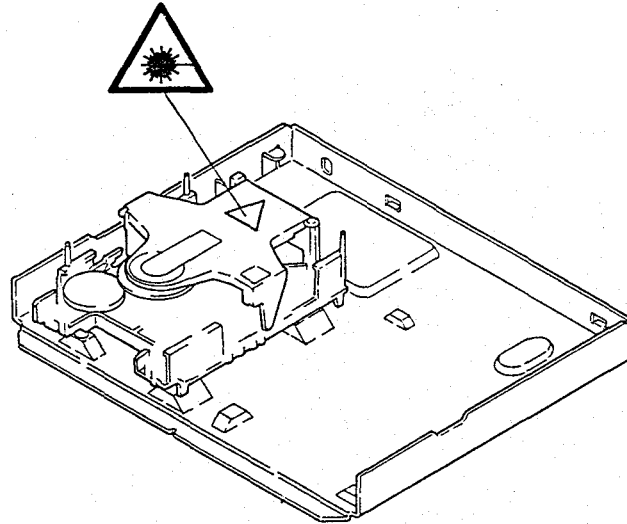
## 1. HANDLING THE PICK-UP

### 1) Shipping and storage cautions
a. The pick-up must be stored in a conductive bag until immediately prior to its use.
b. Do not drop it or subject it to impacts.

### 2) Repair cautions
a. When handling the pick-up, be careful not to give it undue force or shock by your hands. Otherwise the pick-up may malfunction or the PCB may be cracked.
b. **The pick-up which has been minutely adjusted before shipment as one part. Never touch and move the adjusting points and setscrews of the pick-up unless otherwise described in the item of adjustment to avoid damage.**

c. A strong magnet is used in the pick-up.
Do not bring a magnet or other magnetized object near to it.
d. Cleaning the lens
* If dust gets on the lens, clean it away by using an air brush such as used for a camera lens.
* The lens is held in place by a spring.
If the center of the lens is dirty, carefully clean it using cotton swab moistened with isopropylalcohol. Since special coating is made on the surface of the lens which is made of plastics, do not use other kind of alcohol and cleaning fluid to prevent damage to the lens. Also, be carefull not to bend the lens spring when cleaning.

## 2. BEFORE REPAIRING THE CD PLAYER

### 1) Preparations
a. Many ICs, LSI and the pick-up (laser diode) are used in the compact disc player. These components are sensitive to static electricity, and might be damaged by static electricity or high voltage, so particular care should be taken regarding this point.
b. Many precision components and the lens are used in the pick-up.
Never attempt to make repairs, or to store parts, where the temperature or humidity is high, where magnetism is strong, or where there is much dust.

### 2) Notes regarding repairs
a. Be sure to first disconnect the power plug before attempting to replace any component.
b. All tools, instruments, etc., used for measuring must be grounded.
Grounding can be accomplished by using a conductive metal sheet on the work bench.
c. To prevent AV leakage of the soldering iron, ground its metal part.
d. Repair personnel must be grounded.

## 1. Removal of DISC TRAY

Tray drive gear

D

C

(Start tooth)

B

A
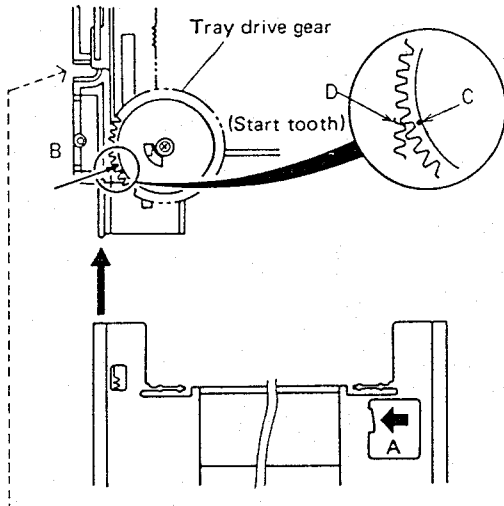
- ° Drive the mechanism to open end. Open/Close SW: ON
- ° Pull the TRAY off the mechanism. (Push the A rib of the TRAY to the direction of arrow and free from chassis rib.)
- ° Turn the PIC drive gear (under chucking lever) slowly manual forward clockwise and move the slide to the front end.
- ° Match the guide groove of TRAY to the chassis guide and insert to the direction of arrow.
- ° Insert the TRAY to the mechanism after to match the C (tooth bottom) to the D (starting tooth) of TRAY rack. Then complete the close motion by Open/Close SW: ON.

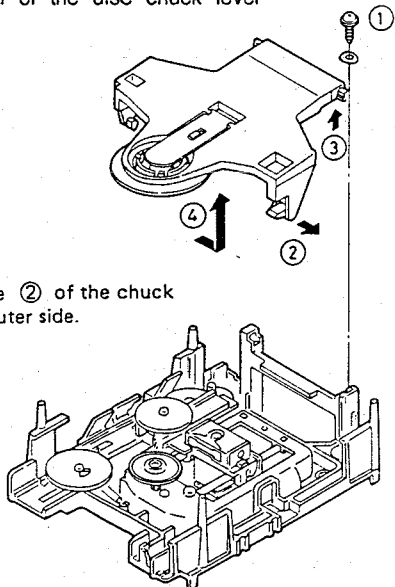(If the left slide obstructs the special screw, turn the PIC drive gear a little.)

Note:
Never turn the TRAY drive gear by hand directly in the all mechanism adjustment so that you will not wound the teeth of the TRAY drive gear.
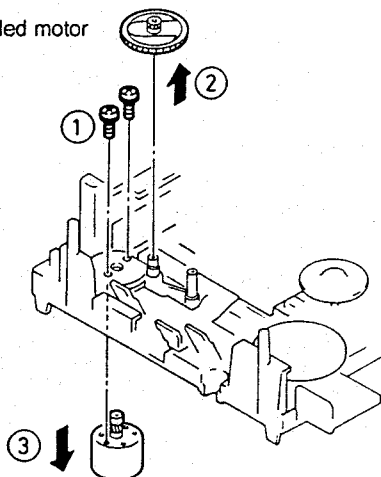
## 2. Removal of the CD Mechanism

a, Removal of the disc chuck lever

①
③
④
②

* Pull the flange ② of the chuck lever to the outer side.

b. Removal of the sled motor

②
①
③

## c. Removal of the spindle motor

①
②
③
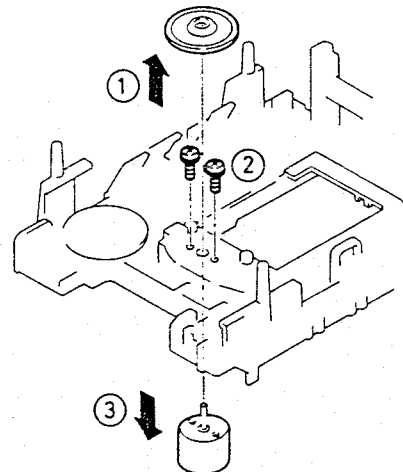
- ● First, prepare the new turntable and new special washer for replacement.
  The removed turntable will be deformed by the heat of the soldering iron, and cannot be reused.
- ● Prepare dial-type calipers.
- (1) The attached bonding material can be dissolved by using a 60W soldering iron to heat the shaft at the lower part of the turntable for about one minute.
- (2) The turntable can then be removed from the shaft by very carefully applying force upward at the center of the lower surface of the turntable.
- (3) Remove the two screw and remove the spindle motor.
- (4) Attach the special washer to the spindle motor.
- (5) Apply a small amount of a mixture (50: 50) of the "Three Bond 2001" and "2105F" bonding material to the motor's shaft.

(6) Install the turntable as shown in the figure.

(7) Secure the turntable by pressing gently.
Be sure to wipe away (by using a piece of cloth, or similar material) any bonding material coming out of the hole.

Don't attached bonding material at the top of shaft

Bonding material

Special washer

(CHASSIS)
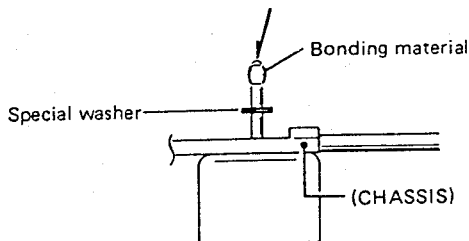
**Be sure to wipe away the bonding material**

17.1 ± 0.1mm

RAIL UPPER SIDE

CHUCK PULLEY

SPINDLE MOTOR SHAFT
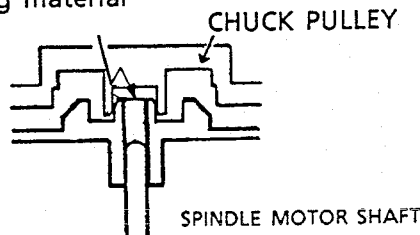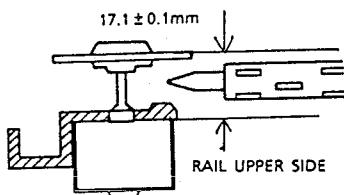
**e. Replacement and lubrication of the pick-up**

(1) Before replacement of the pick-up, be sure to carefully read the section regarding the pick-up when the unit is moved or transported.

(2) Remove the two pick-up rail with care fixing the 2 latch with any way driver from bottom of chassis.

(3) When replacing the pick-up, carefully wipe away the grease from the shafts on which the pick-up is mounted.

(4) Replace the pick-up.

(5) Move the pick-up to the position at the left side, and then apply a coating of floil (G-474B) to the two shafts.

(6) Move the pick-up to the right side and apply floil to the remaining of the shafts.

PICK-UP

SHAFT

SHAFT
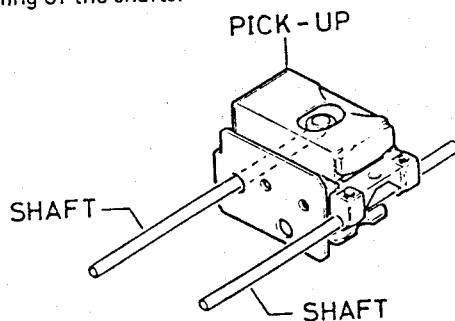
**d. Removal of Pickup**
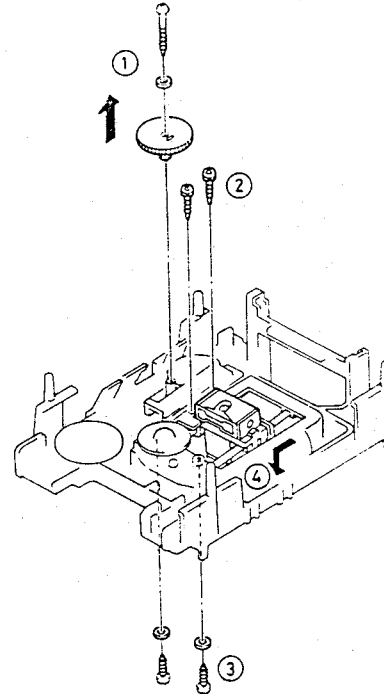
**f. Inspection of slip current.**

Stop the TRAY on opening by force, check the slip mechanism (next gear assy of motor)

o Confirm that the inner gear stops and outer gear, and motor's gear rotate.

o Confirm that the scale of corrent meter is 225mV ~ 275mV. ( * )

o Check this slip inspection on DC 6.0V.

CLUTCH OUTER GEAR   PICK DRIVE GEAR

C

CLUTCH SPRING WIRE : D

from SLED MOTOR
| BLUE  | 1 |
| ORANGE | 2 |
| BLACK | 3 |
| RED | 4 |

DC 6V
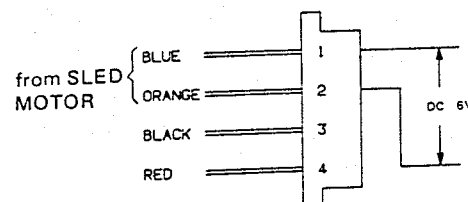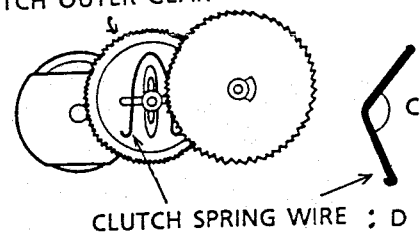
* In the case of that DC current scale don't display 225mV~275mV,adjust to below items.

#read current value:A .amount of the grease(Silicon G333):B bender angle of the spring wire D:C

A>275mV →increase the angle C or
          decrease B.

A<225mV →decrease the angle C or
          increase B.

# CD ADJUSTMENT

### Electrical Adjustment

So far we have presented explanations regarding compact disc player handling, notes prior to repair, handling the pick-up and disassembly of the unit. Be sure to carefully read these instructions before making any adjustments.

## Test discs required for adjustments and checks

| No. | Destination | Description (manufacturer) |
|-----|-------------|----------------------------|
| 1 | 414 245-2 | for Demonstration (Polygram) |

### A. Preparations for Adjustments

(a) Measuring instruments, tools and filter

(1) Test disc.: YEDS 17, -10dB, 1KHz (Sony)

(2) Oscilloscope: SS5711 (10MHz or dual phenomenon) or Memoryscope: DSS6521 (Storagescope)

(3) Digital voltmeter (Input impedance 1M ohm or more)

Note: Test disc are subject to change without notice.

**BAND PASS FILTER**

(4) Oscillator (400Hz, 300mV RMS)

(5) Frequency Counter (5MHz; or more)

(6) Screw drivers (non-metalic) for adjustments

(7) Filter

(8) DC Power supply: 15V, 1A Class

Notes: a. The adjustments can be using the equipment produced by other manufactures provided that the performance of that equipment corresponds to that of the above listed models.

b. Use a 10:1 probe for observing signals on the oscilloscope and storage scope.

c. Test disc is subject change without notice.

## 1. Initial set up

Set the initial position of adjustment controls as shown in figure below.
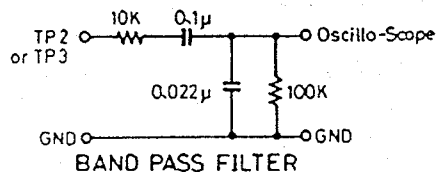
## 2. Free-run Frequency adjustment(PLL-VCO)

1. Connect the frequency counter to TP12(H), TP14(GND).
2. Turn on the power of the unit.
3. Adjust T1102 so that the frequency counter shows 4.30±0.01MHz.
   · if the adjustment is imperfect, get the long seek time, not read TOC, not sound. in the worst case become high speed turning, reveres turning and it may wound the disc.

## 3. Tracking Offset Adjustment (adjustment location:SVR1104)

1. Connect the oscilloscope to TP15 (H), TP4 (GND), and shot TP18(T Offset), TP14(GND).
2. Turn on the power of the unit.
3. Adjust SVR1104 so that the DC voltage at TP15 is 60mV± 20mV.
   · If the adjustment is imperfect, become inferior playability can not playback the disc.
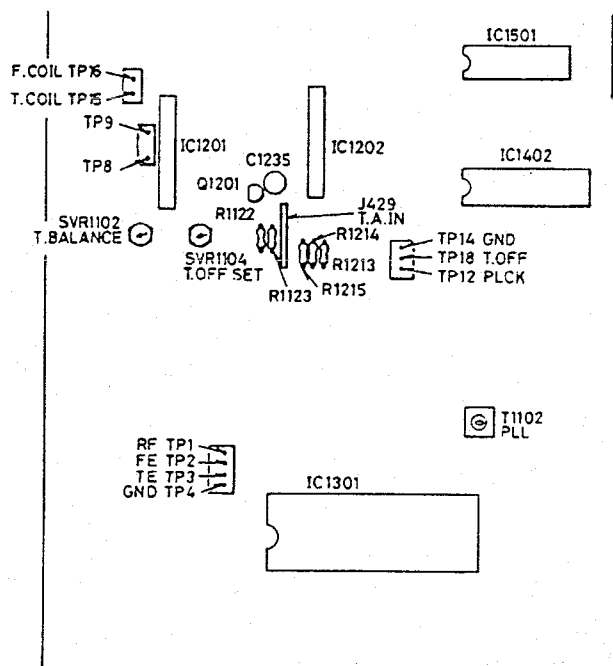
Note: Set the SVRs to the position as shown prior to the adjustment.

# CD ADJUSTMENT

## 4. Tracking Balance Adjustment (SVR1102)

1. Connect the oscilloscope to TP3 (TE) and TP4 (GND.).
2. Turn on the power of the unit. Insert test disc.
3. Press the play button.
4. Continuously press the foward search ▸▸ or ▸▸ button to do it
5. Adjust SVR1102 so that the TE (Tracking Error) signal waveform of TP3 on the oscilloscope is vertically symmetrical relative to 0V. (See figure below)

*If the adjustment is imperfect, become run away the spindle motor(pick-up sending motor), inferior playability.



◂◂SEARCH
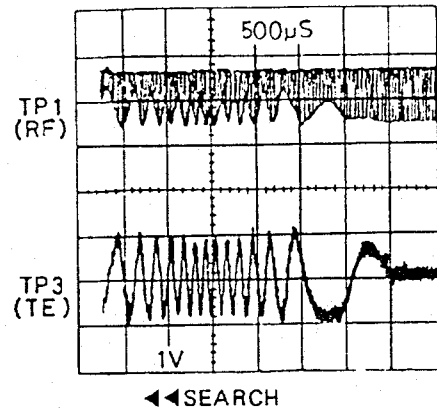
## 5. FOCUS Gain CONFIRMATION

1. Connect the storage scope to TP2 (F.E) by the Band pass filter. 1 (See befor page)
2. Turn on the power of the unit.
3. play the test disc.

4. Set the output of AF oscillator to 400Hz, 0.5V rms and connect to TP8 (IC1201 pin3) by resistor 62K ohm.
5. Confirm so that the voltage of F.E signal waveform on the storage scope is 1V p-p, ±3db by through BPF1.

*If this CONFIRMATION is imperfect, become weak the mechanical shock, inferior playability, and can not playback the Disc.
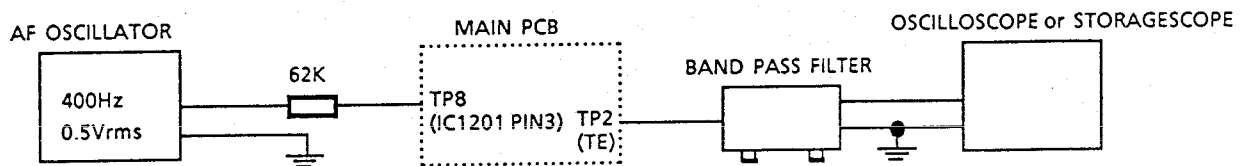


## 6. Tracking Gain CONFIRMATION

1. Connect the storage scope to TP3 (T.E) by the Band pass filter, 1 (See BPF Figure).
2. Turn on the power of the unit.
3. playback the test disc.

4. Set the output of AF oscillator to 400Hz, 0.5V rms and connect to TP9 (IC1201 pin 7) by resistor 560K ohm.
5. Confirm so that the voltage of T.E signal waveform on the storagescope is 1V p-p, ±3db by through BPF1.

*If this CONFIRMATION is imperfect, become weak the mechanical shock, inferior playability, and can not playback the Disc.
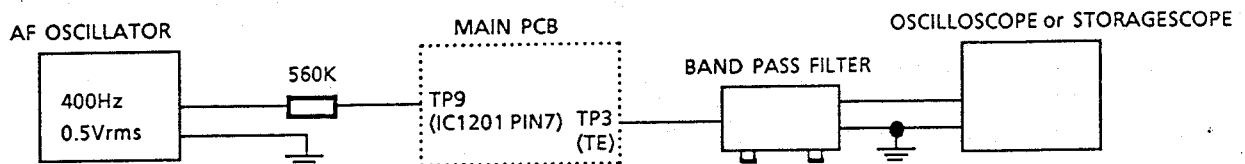
# TEST POINT WAVE FORM

① TP 1
   RF SIGNAL
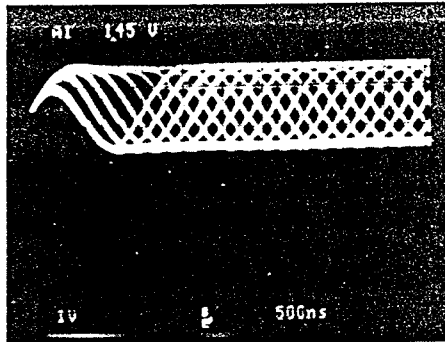
③ TP 1
   RF SIGNAL
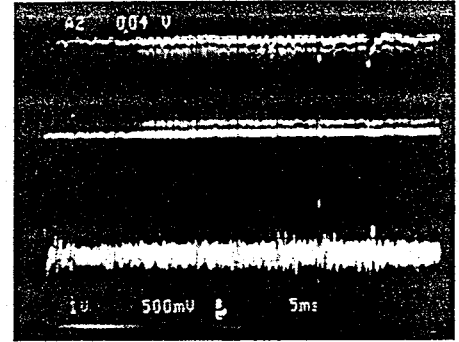
   TP 2
   FOCUS ERROR
   SIGNAL

② IC401-6
   EFM SIGNAL
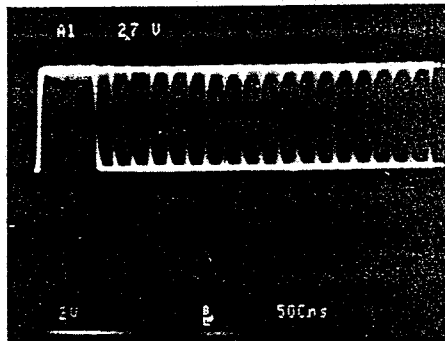
④ TP 1
   RF SIGNAL
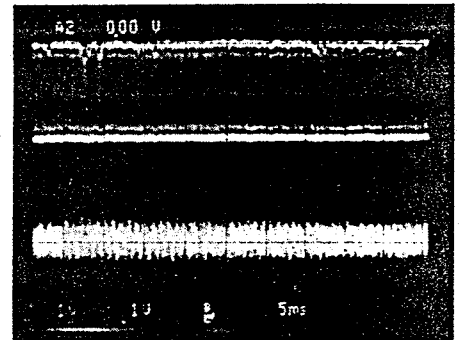
   TP 3
   TRACKING
   ERROR SIGNAL

SEARCH TIME
⑤ TP 1
   RF SIGNAL
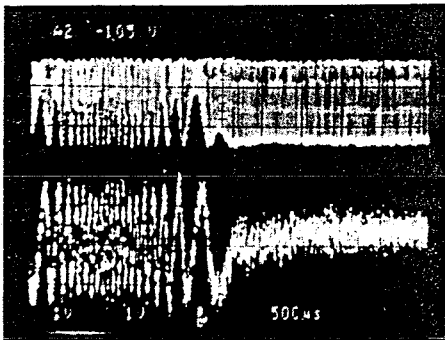
TP 3
TRACKING
ERROR SIGNAL

⑦ IC501 PIN 9
   BLCK

   PIN 8
   DATA

   PIN 7
   WCLK 1

   PIN 6
   LRCK
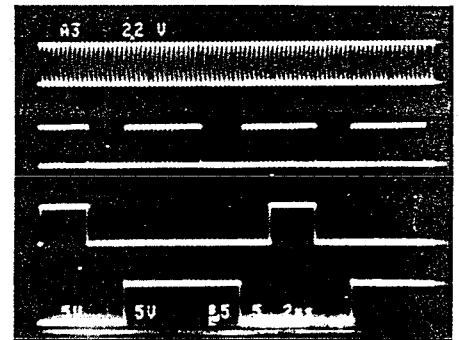
⑥ TP12
   PLCK
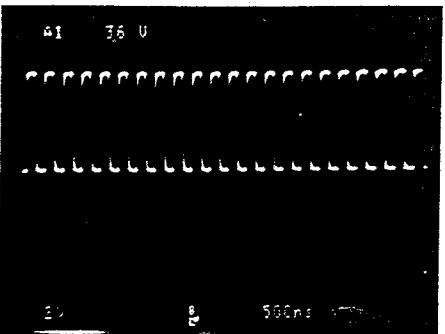
# TUNER ADJUSTMENT

- Use a plastic screwdriver for adjustment.
- Adjust the intermediate frequency of AM and FM to the frequency of ceramic filter.

RF Level:75 ohn ,Open SG voltage dB$\mu$V

## (1) FM BAND
Antenna : 75 ohm Direct Modulation : 1kHz  Dev.: $\pm$22.5kHz (mono/stereo), $\pm$6.75kHz(pilot)

| STEP | ITEMS | | FREQUENCY INDICATED POSITION | INPUT CONDITIONS | | OUTPUT CONDITIONS | | ADJUST-ING PARTS | STANDARDS |
|------|-------|--|------------------------------|------------------|--|-------------------|--|-------|-----------|
| | | | | MEASURING INSTRUCTIONS | CONNECT-IONS | MEASURING INSTRUCTIONS | CONNECT-IONS | | |
| 1 | IF | V-Curve | 98.0 MHz | FM Sweep Generator (10.7MHz Non Modulation Small Input) | TP103(H) | FM Sweep Generator | V: TP203(H) S: TP204(H) TP205(E) | T201 | Max. |
| | | S-Curve | | | TP102(E) | | | T202 | Symmetrical Wave Max. |
| 2 | Tuning Cover | Low | 87.5 MHz | ----- | ---- | Digital Voltmeter | TP401(H) | L104 | 1.25$\pm$0.05V |
| | | High | 108.0 MHz | | | | TP102(E) | --- | Confirm voltage below 8.5V |
| 3 | Tracking | Low | 90.0 MHz | FM-SG(9dB) | FM ANT TERMINAL | VTVM Oscilloscope | Tuner Out (L/R,E) | L101 L102 | Max. |
| | | High | 106.0 MHz | | | | | CT101 | |
| 4 | IF S-Curve (0V) | | 98.0 MHz | FM-SG(66dB) | FM ANT TERMINA | VTVM Oscilloscope | TP204(H) TP205(E) | T202 | 0$\pm$0.05V |
| 5 | SD | | 98.0 MHz | (26dB) | FM ANT TERMINA | Frequency Counter | TP207(H) TP205(E) | SVR201 | SD Output low (Autostop sensitivity) |
| 6 | * VCO (19 kHz) | | 98.0 MHz | FM-SG(66dB) (Non Modulation) | FM ANT TERMINA | Digital Voltmeter | TP301(H) TP302(E) | SVR302 | 19$\pm$0.05kHz |

*: Use IHF filter adjusted from 200~15000 Hz BPF. Set the Mode switch to STEREO position. When connect counter should be inserted 220k ohm resist in series.

Note:   Be careful so that digital voltmeter earth (including case) may not be in con-tact with other measuring equipments earth. ( including case)

## (2) MW BAND
Antenna : IRE Loop, Standerd output : 100dB , Modulation : 1kHz 30%

| STEP | ITEMS | | FREQUENCY INDICATED POSITION | INPUT CONDITIONS | | OUTPUT CONDITIONS | | ADJUST-ING PARTS | STANDARDS |
|------|-------|--|------------------------------|------------------|--|-------------------|--|-------|-----------|
| | | | | MEASURING INSTRUCTIONS | CONNECT-IONS | MEASURING INSTRUCTIONS | CONNECT-IONS | | |
| 1 | IF(999 kHz) | | 459  kHz | AM Sweep Generator (459kHz Non Modulation) | TP151(H) TP152(E) | AM Sweep Generator | TP206(H) TP205(E) | X205 | Don't adjustment. Preadjustmented. |
| 2 | Tuning Cover | Low | 522 kHz | ----- | ---- | Digital Voltmeter | TP401(H) | L153 | 1.4$\pm$0.03V |
| | | High | 1611 kHz | | | | TP102(E) | CT153 | 8.0$\pm$0.05V |
| 3 | Tracking | Low | 603 kHz | AM-SG(78dB) | IRE Loop Ant. | VTVM Oscilloscope | Tuner Out (L/R,E) | L151 | Max. |
| | | High | 1404 kHz | | | | | CT151 | |
| 4 | SD | | 999 kHz | AM-SG(85dB) | IRE Loop Ant. | Digital Voltmeter | TP207(H) TP205(E) | SVR202 | SD Output low (Autostop sensitivity) |

# TUNER ADJUSTMENT

## (3) LW BAND

Antenna : IRE Loop, Standerd modulation : 400Hz 30%

| STEP | ITEMS | | FREQUENCY INDICATED POSITION | INPUT CONDITIONS | | OUTPUT CONDITIONS | | ADJUST-ING PARTS | STANDARDS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MEASURING INSTRUCTIONS | CONNECT-IONS | MEASURING INSTRUCTIONS | CONNECT-IONS | | |
| 2 | Tuning Cover | Low | 144 kHz | ---- | --- | Digital Voltmeter | TP401H) TP102(E) | L154 | 1.6±0.03V |
| | | High | 290 kHz | | | | | CT154 | 7.0±0.05V |
| 3 | Tracking | Low | 162 kHz | AM-SG(85dB) | IRE Loop Ant. | VTVM Oscilloscope | Tuner Out (L/R,E) | L152 | Max. |
| | | High | 279 kHz | | | | | CT152 | |

# PARTS LOCATIONS

## (TUNER)



## (DECK)



PLAYGAIN ADJUSTMENT

|  | L-ch | R-ch |
|---|---|---|
| TAPE A | SVR502 | SVR602 |
| TAPE B | SVR501 | SVR601 |

-8-
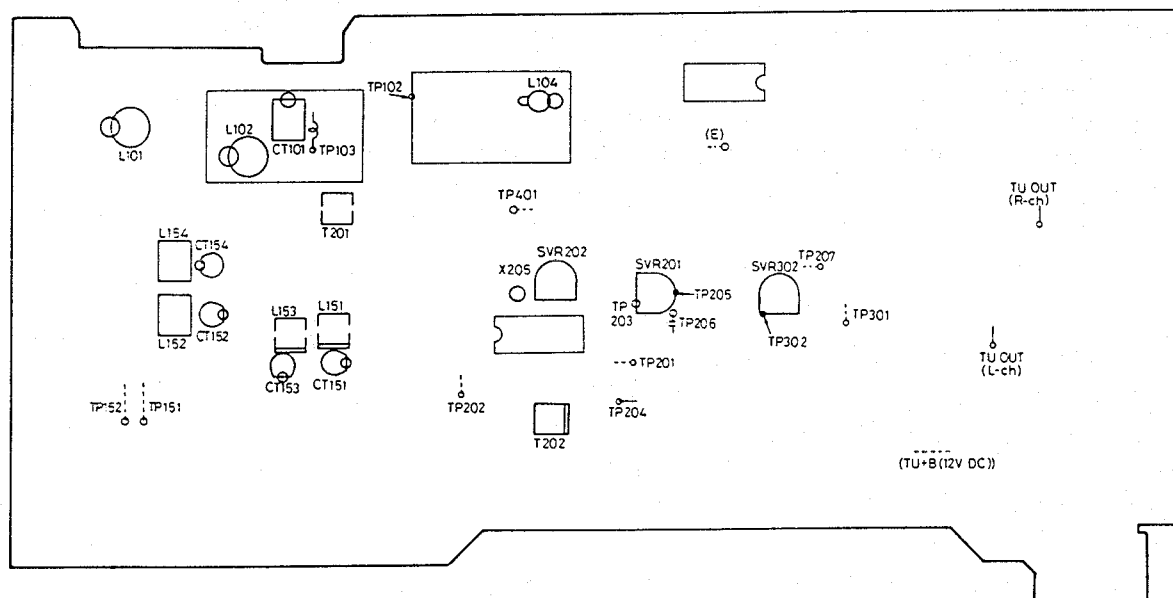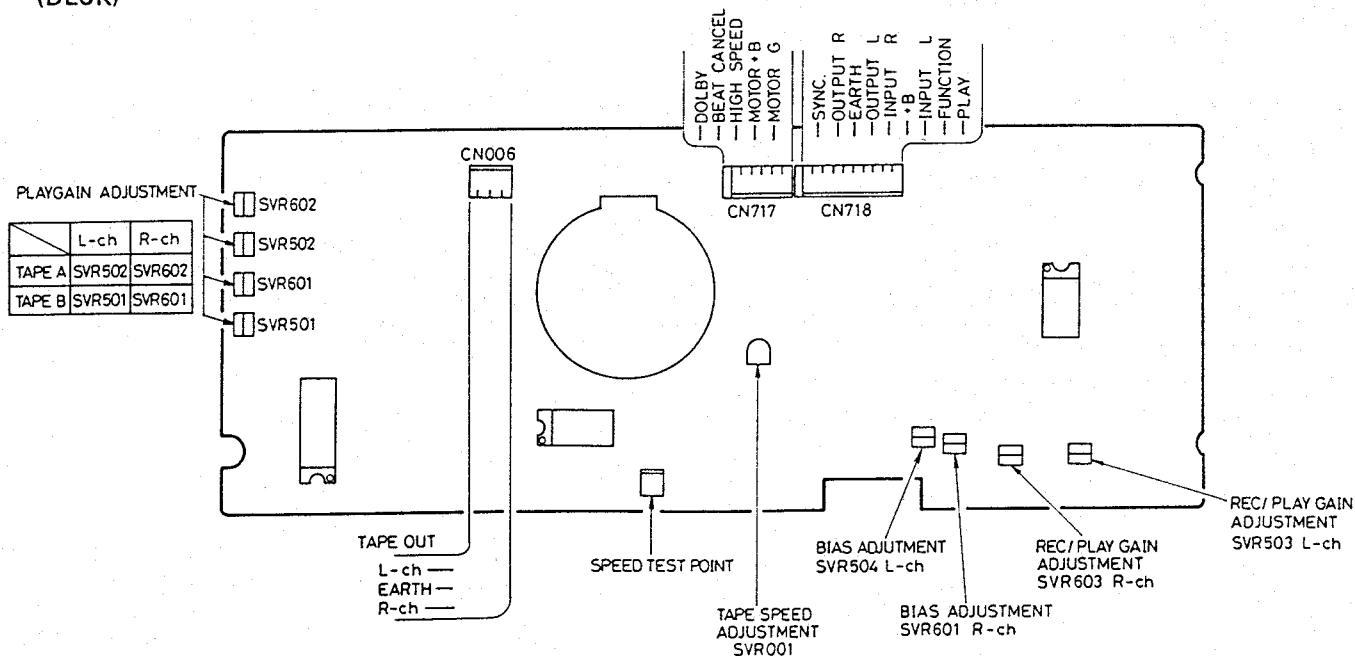
## ADJUSTMENT OF DECK & TORQUE

### Amplifier Adjustment

| | Item | Deck | Test Tape | Input | DolbySw | Output | Adjust Point | Remarks |
|---|---|---|---|---|---|---|---|---|
| 1 | Head Azimuth | TAPEA TAPEB | VTT738 | - | OFF | POINT B | Azimuth Screw | Adjust so as 10kHz output become maximum. |
| 2 | Playback Level | TAPEA TAPEB | TCC130 200nW/m | - | OFF | TAPE OUT | SVR502 SVR602 SVR501 SVR601 | Adjust so as TAPE OUT output become 0.64V |
| 3 | Rec/Play Level | TAPEB | AC224 | 1kHz -13dB | OFF | TAPE OUT | SVR503 SVR603 | Adjust SVR so as Monitor o/p = R/P Level = 0dB ± 1V |
| 4 | Rec/Play Frequency | TAPEB | AC224 | 1kHz (-13dB) 10kHz(-20dB) | ON | TAPE OUT | SVR504 SVR604 | Adjust to obtain same output of 1kHz and 10kHz. |

Input terminal:LINE IN

**Note.** 1.Perform BIAS aligment by SVR 504,604 so as No.3 satisfy spec of all item. Perform output aligment by SVR503,603.

2.During aligment,mesurement Beat cancel SW is at 1 condition fundamentally,cfm.R/P frequency characteristic,dolby effect also by 2 condition ,when ship out set SW to 1 position.

3.Fix to MAIN VR the position that SP output playing VTT722 is about 2.83V-10dB(2.83V ≒ 1W output).

### Tape Speed Adjustment

Please adjust the tape speed of set,according to following.

(1) Set the mechanism to the stop mode.

(2) Insert the test tape (MTT-111N,etc.:3000Hz) into the play-only-mechanism.

   Note: Set the test tape near the tape end.

(3) Please the PLAY button.

(4) Insert the driver to the hole at the back of set.

(5) Adjust SVR(on the PCB)so that a frequency counter reading of 3000Hz +-5Hz is obtained.

(6) Press the STOP button,and eject the test tape.

(7) Insert the test tape (TCW-211,etc.:1500Hz) into the Play-only-mechanism.

(8) Insert the test tape (SANYO C-60,etc.) into the Record/Play-mechanism.

(9) Set the High speed test point to the high speed position(shorting).

(10) Press the PLAY button of P-mecha and press the REC button of R/P mecha. (The mechanism is high,speed dubbing.)

(11) Confirm that a frequency counter reading of 3000Hz +-10%(2700-3300Hz) is obt ained.

| Item | Take-up torque | Back tention | Pulley tention |
|---|---|---|---|
| Test cassette | PLAY:TW2111 FFWD/REW;TW2231 | PLAY/F.F:TW211 REW:Trque Gage | Driving power cassette:TW-2412 |
| PLAY | 30~60gr.cm | 2~5.0gr.cm | >60g |
| F.FWD | 70~140gr.cm | - | |
| REW | 70~140gr.cm | - | |

# HOW TO DISASSEMBLY THE UNIT

## 1.REPLACEMENT OF HEAD

TAPE "B"
P/R HEAD

BLUE
YELLOW
ORANGE

BLACK
WHITE
RED

WHITE

BLACK

BLUE
WHITE
RED
BLACK

TAPE "A"
PLAY HEAD

WHITE
RED

YELLOW
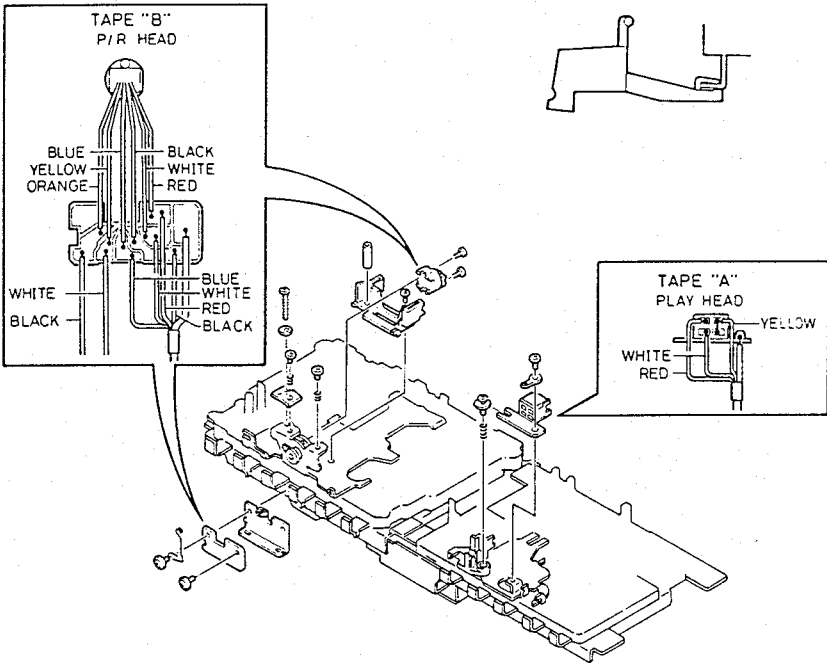
## 2.ASSEMBLE OF MECHANISM BUTTON
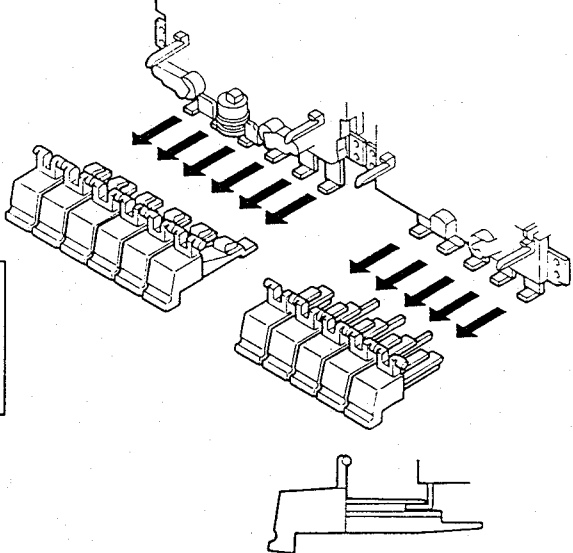
# REMOTE CONTROLLER (RB X801)

1

2
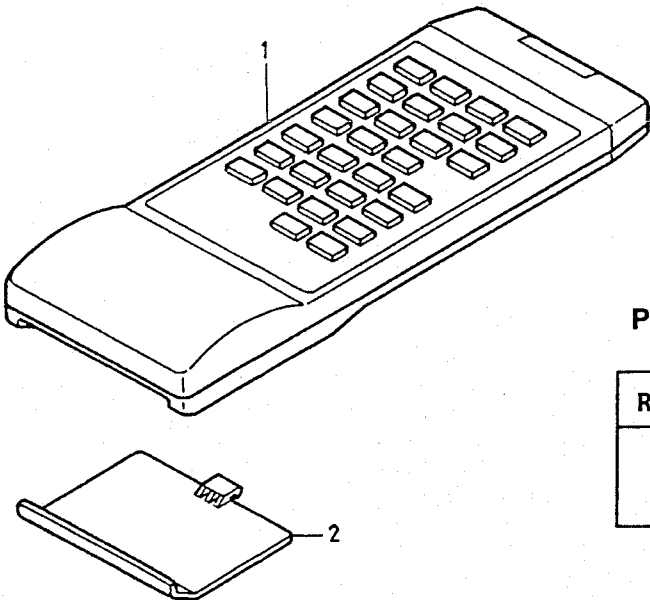
## PARTS LIST

| Ref No. | Part No. | Description |
|---------|--------------|---------------|
| 1 | 614 226 0982 | ASSY,REMOCON |
| 2 | 614 226 1002 | LID,BATTERY |

(W GERMANY)

(ITALY)

---
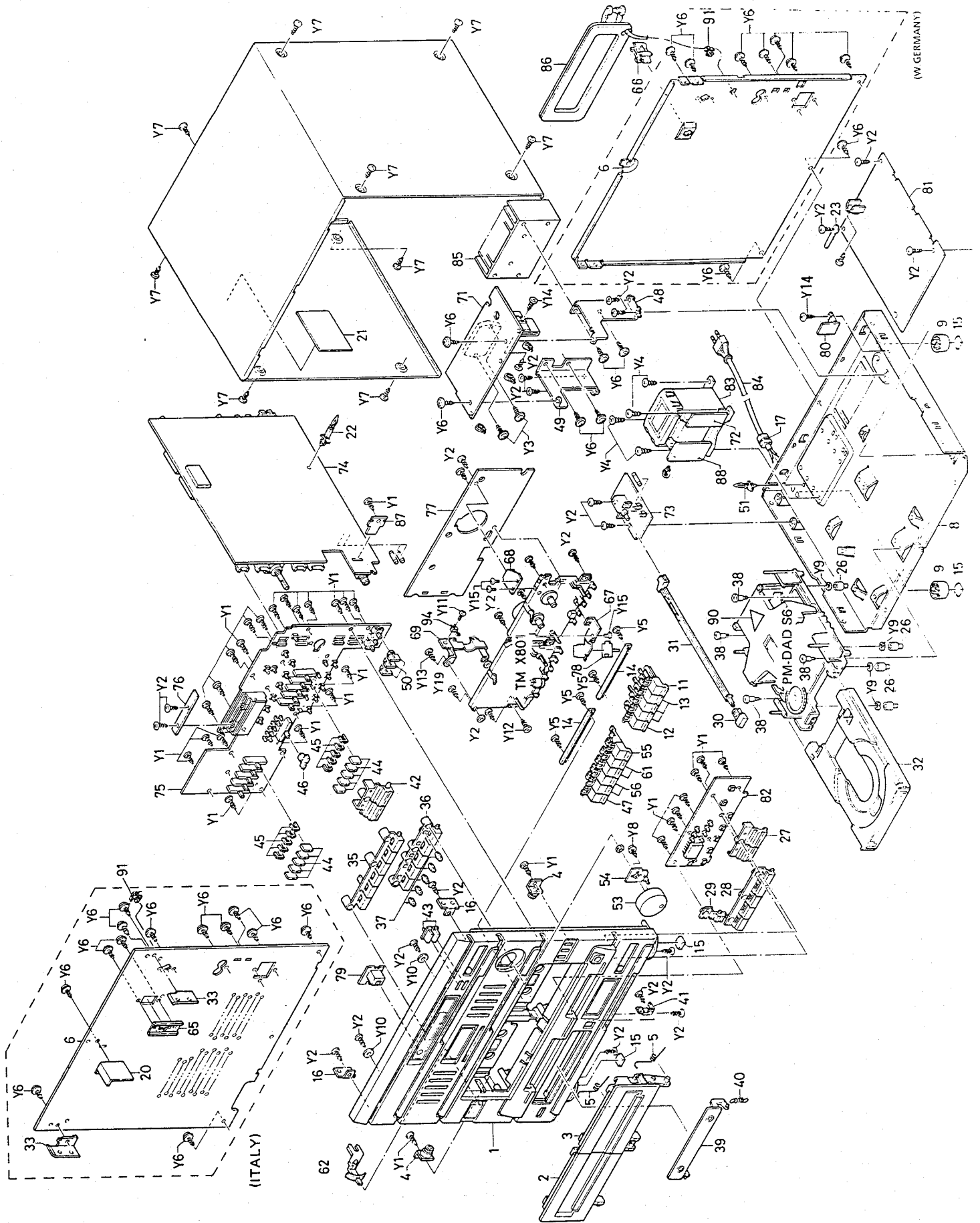
**PRODUCT SAFETY NOTICE**

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.

## PACKING & ACCESSORIES

| Ref. No. | Part No. | Description |
|---|---|---|
| | 614 221 9997 | INNER CARTON (ITALY) |
| or | 614 221 9980 | INNER CARTON (W.GERMANY) |
| | 614 221 4787 | PAD |
| | 614 208 7855 | PAD |
| | 614 176 7024 | INNER POLYE COVER (SET) |
| | 614 176 3170 | INNER POLYE COVER (INST) |
| | 614 180 4644 | PROTECTOR SHEET |
| | 614 191 3681 | LABEL, LASER |
| | 614 222 0047 | INSTRUCTION MANUAL (ITALY) |
| or | 614 222 0030 | INSTRUCTION MANUAL (W.GERMANY) |
| | 614 023 7344 | ANT (W.GERMANY) |

## CABINET & CHASSIS

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 614 221 4466 | ASSY, PANEL, FRONT |
| 2 | 614 221 0178 | ASSY, LID, CASSETTE, A |
| 3 | 614 221 6613 | ASSY, LID, CASSETTE, B |
| 4 | 614 069 0385 | GEAR ASSY |
| 5 | 614 218 0051 | SPRING, WIRE, LID CASSETTE |
| 6 | 614 221 9768 | PANEL, REAR (W. GERMANY) |
| 8 | 614 224 4166 | CABINET, BOTTOM |
| 9 | 614 207 2387 | FOOT |
| 11 | 614 220 6751 | KNOB, LEVER, R |
| 12 | 614 220 6768 | KNOB, LEVER L |
| 13 | 614 220 6775 | KNOB, LEVER |
| 14 | 614 194 9239 | BRACKET |
| 15 | 614 106 4215 | STAND |
| 16 | 614 207 2394 | BRACKET-E |
| 17 | 614 129 1901 | FIXER |
| 20 | 614 198 1888 | BRACKET, PANEL REAR (ITALY) |
| 21 | 614 224 3695 | LABEL, SAFETY, LASER |
| 22 | 614 129 5534 | FIXER, TU PCB |
| 23 | 614 129 9136 | LUG, CD PCB |
| 26 | 614 195 6978 | RUBBER CUSHION |
| 27 | 614 220 6836 | BUTTON, CD PLAY |
| 28 | 614 220 6867 | BUTTON, CD FUNCTION |
| 29 | 614 220 6850 | BUTTON, CD EJECT |
| 30 | 614 220 6874 | BUTTON, POWER |
| 31 | 614 112 7231 | JOINT, POWER SW |
| 32 | 614 221 1410 | TABLE, LOADING, CD TRAY |
| 35 | 614 220 6904 | BUTTON, PRESET |
| 36 | 614 220 6898 | BUTTON, FUNCTION |
| 37 | 614 221 0222 | WINDOW, FUNCTION LED |
| 38 | 412 004 5705 | SPECIAL SCREW |
| 39 | 614 220 6607 | DOOR |
| 40 | 614 221 0246 | SPRING, TENS, CD DOOR |
| 41 | 614 220 6928 | BRACKET-M, CD DOOR |
| 42 | 614 220 6829 | BUTTON, TU |
| 43 | 614 220 6843 | BUTTON, BAND MODE |
| 44 | 614 220 6737 | KNOB, SLIDE, EQ |
| 45 | 614 220 6690 | WINDOW, EQ |
| 46 | 614 220 6744 | KNOB, SLIDE, BALANCE |
| 47 | 614 220 6799 | KNOB, LEVER, MECH (L) |
| 48 | 614 208 9262 | BRACKET-E |
| 49 | 614 208 9279 | BRACKET-E |
| 50 | 614 220 6881 | BUTTON, DOLBY DUB SPEED |
| 6 | 614 221 9744 | PANEL, REAR (ITALY) |
| 33 | 614 207 2455 | SUPPORT (ITALY) |

| Ref. No. | Part No. | Description |
|---|---|---|
| 51 | 614 129 5527 | FIXER, BOTTOM |
| 53 | 614 224 3442 | KNOB, ROTARY, VOL |
| 55 | 614 220 6782 | KNOB, LEVER, MECH (R) |
| 56 | 614 222 9750 | KNOB, LEVER, MECH |
| 61 | 614 220 6805 | KNOB, LEVER. MECH |
| 62 | 614 220 6812 | KNOB, LEVER. TAPE MODE |
| 64 | 614 220 6560 | CABINET |
| 65 | 614 113 9678 | BRACKET, LOOP ANT (ITALY) |
| 66 | 614 108 0307 | BRACKET, LOOP ANT |
| 67 | 614 220 6935 | BRACKET-M, MECH PCB |
| 68 | 614 216 9247 | BRACKET-E, MECH PCB |
| 69 | 614 220 6942 | BRACKET-M. MECH PCB |
| 90 | 614 191 3698 | LABEL, LASER |
| | 614 130 0382 | LUG, DECK PCB |
| 91 | 614 108 1076 | BRACKET, ANT LEAD FIX (W.GERMANY) |

## FIXING PARTS

| Ref. No. | Part No. | Description |
|---|---|---|
| Y1 | 411 021 3503 | SCR S-TPG BIN 3X10 |
| Y2 | 411 021 6405 | SCR S-TPG BIN 3X8 |
| Y3 | 411 020 9506 | SCR S-TPG BRZ + FLG 3X16 |
| Y4 | 411 001 4209 | SCR S-TPG BIN 4X8 |
| Y5 | 411 021 3107 | SCR S-TPG BIN 2.6X8 |
| Y6 | 411 020 8905 | SCR S-TPG BRZ + FLG 3X10 |
| Y7 | 411 021 6603 | SCR S-TPG BIN 3X8 |
| Y9 | 411 087 8108 | WASHER V 3X8X0.5 |
| Y10 | 411 092 3303 | WASHER Z 3X12X1 |
| Y11 | 411 020 1302 | SCR PAN PCS 1.7X5 |
| Y12 | 411 021 5705 | SCR S-TPG BIN 3X6 |
| Y13 | 411 021 0809 | SCR S-TPG BIN 2X6 |
| Y14 | 411 027 3101 | SCR S-TPG BIN 3X8 |
| Y15 | 411 022 7500 | SCR S-TPG PAN 2X4 |
| Y18 | 411 024 3807 | SCR S-TPG PAN + FLG 2X8 |
| Y19 | 411 021 4005 | SCR S-TPG BIN 3X12 |

## ELECTRICAL PARTS

| Ref. No. | Part No. | Description |
|---|---|---|
| 83 | ⚠ 614 221 7429 | POWER TRANS |
| 84 | ⚠ 614 023 3100 | POWER CORD |
| 85 | 614 221 4916 | HEAT SINK |
| 86 | 614 036 8970 | LOOP ANT ASSY |
| 87 | 614 224 4227 | PCB, HP (ITALY) |
| or | 614 224 4227 | PCB, HP (W.GERMANY) |
| 88 | 614 221 4534 | PCB, PT PRI (ITALY) |
| or | 614 225 6930 | PCB, PT PRI (W.GERMANY) |
| 94 | 614 195 7104 | SWITCH |
| | 614 223 8066 | ASSY, CONNECTOR-S |
| | 411 027 1602 | SCR S-TPC BIN 2.6X6 |
| | 614 129 9136 | LUG |
| F701 | ⚠ 423 016 8004 | FUSE 250V 3.15A |
| F801 | ⚠ 423 016 8004 | FUSE 250V 3.15A |
| F999 | ⚠ 423 017 0007 | FUSE 250V 1A |

## MAIN AMP PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 71 | 614 221 4350 | ASSY, PCB, MAIN AMP (ITALY) |
| or | 614 225 6732 | ASSY, PCB, MAIN AMP (W.GERMANY) |
| | 614 223 9216 | SOCKET |
| or | 614 020 6555 | SOCKET, 3P |
| | 614 020 1246 | SOCKET, 5P |
| | 614 020 1222 | SOCKET, 3P |
| | 614 216 5249 | SOCKET |
| | 614 224 3527 | ASSY, CONNECTOR-S |
| IC710 | 409 067 2109 | IC STK4162MK2 |
| IC903 | 409 078 2402 | IC L7812ML |
| or | 409 122 6202 | IC NJM7812FA |
| or | 409 168 2107 | IC UPC7812HF |
| or | 409 001 7603 | IC AN7812F |
| or | 614 203 7362 | HEAT SINK |
| Q901 | 405 015 1606 | TR 2SC2655-Y |
| Q902 | 405 001 9302 | TR 2SA1020-Y |
| Q903 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| D901 | 407 077 7800 | DIODE RBV-402LF-A |
| D905 | 407 004 9105 | DIODE DSF10C |
| D906 | 407 004 9105 | DIODE DSF10C |
| D907 | 407 004 9105 | DIODE DSF10C |
| D908 | 407 004 9105 | DIODE DSF10C |
| D909 | 407 053 3208 | ZENER DIODE MTZ12B |
| D910 | 407 053 3208 | ZENER DIODE MTZ12B |
| D911 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D912 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D948 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| C901 | 403 057 3800 | POLYESTER 0.1U M 50V |
| C902 | 403 057 3800 | POLYESTER 0.1U M 50V |
| C903 | 403 057 3800 | POLYESTER 0.1U M 50V |
| C906 | 403 053 4405 | ELECT 2200U M 35V |
| R757 | ⚠ 401 008 7204 | CARBON 2.2K JB 1/2W |
| R857 | ⚠ 401 008 7204 | CARBON 2.2K JB 1/2W |
| R901 | ⚠ 402 045 1507 | RESISTOR 0.47 J- 1W |
| R902 | ⚠ 402 023 1703 | FUSIBLE RES 100 J- 1/4W |
| R903 | ⚠ 402 023 1703 | FUSIBLE RES 100 J- 1/4W |
| R914 | ⚠ 402 023 1703 | FUSIBLE RES 100 J- 1/4W |
| R915 | ⚠ 402 023 1703 | FUSIBLE RES 100 J- 1/4W |

## PT SEC PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 72 | 614 221 4374 | ASSY, PCB, P.T SEC (ITALY) |
| or | 614 225 6756 | ASSY, PCB, PT SEC (W.GERMANY) |
| | 614 020 6555 | SOCKET, 3P |
| | 614 020 1246 | SOCKET, 5P |
| IC901 | ⚠ 614 205 2914 | IC PROTECTOR ICP-N25 |
| IC902 | ⚠ 614 205 2914 | IC PROTECTOR ICP-N25 |

## POWER SWITCH PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 73 | 614 221 4381 | ASSY, PCB, POWER SW (ITALY) |
| or | 614 225 6763 | ASSY, PCB, POWER SW (W.GERMANY) |
| | ⚠ 614 018 8967 | SWITCH |
| | ⚠ 614 086 2164 | COVER |
| | 614 208 4540 | FUSE HOLDER |
| | 614 017 8203 | TERMINAL BOARD |
| C999 | ⚠ 404 000 1607 | CERAMIC 0.01U F 400V |
| or | ⚠ 404 033 3401 | CERAMIC 0.01U Z - |

## VR MOTOR PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 94 | 614 221 9348 | ASSY, PCB, VR MOTOR (ITALY) |
| or | 614 224 4036 | ASSY, PCB, VR MOTOR (W.GERMANY) |
| | 614 020 6562 | SOCKET, 4P |
| | 614 017 3819 | PLUG, 2P |
| L961 | 614 027 9214 | CHOKE COIL |
| IC961 | 409 114 4803 | IC LB1641 |
| D961 | 407 053 5806 | ZENER DIODE MTZ4.7B |
| C961 | 403 001 1609 | CERAMIC 0.01U K 16V |
| C962 | 403 001 1609 | CERAMIC 0.01U K 16V |
| R966 | ⚠ 402 004 4303 | FUSIBLE RES 10 J- 1/4W |
| R974 | 401 014 4105 | CARBON 1.5K JA 1/4W |

## TUNER, PRE, PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 74 | 614 221 9362 | ASSY, PCB, TUNER, PRI (ITALY) |
| or | 614 224 4043 | ASSY, PCB, TUNER, PRE (W.GERMANY) |
| | 614 035 2702 | SOCKET, VIDEO (ITALY) |
| or | 614 224 9864 | SOCKET, VIDEO (W.GERMANY) |
| | 614 019 8553 | SOCKET, PHONO |
| | 614 016 8341 | PLUG, 2P |
| | 614 208 2379 | SOCKET, PRE-FRONT 1 |
| | 614 208 2331 | SOCKET, PRE-FRONT 2 |
| | 614 208 2348 | SOCKET, PRE-FRONT 3 |
| | 614 035 4942 | SOCKET, 5P |
| | 614 017 2102 | PLUG, 3P |
| | 614 035 1712 | SOCKET, HEAD PHONE |
| | 614 218 0068 | TERMINAL, SP |
| | 614 216 5157 | PLUG, 10P |
| | 614 020 6623 | SOCKET, 10P |
| | 614 017 1440 | PLUG, 3P |
| | 614 208 4540 | FUSE HOLDER |
| | 614 208 2355 | SOCKET, PRE-FRONT 4 |
| | 614 020 6562 | SOCKET, 4P |
| | 614 020 1222 | SOCKET, 3P |
| | 614 116 5349 | SHIELD PLATE |
| | 614 117 1029 | SHIELD PLATE |
| | 614 210 4675 | FILTER |
| | 614 218 2840 | TERMINAL |
| CT101 | 614 007 3683 | TRIMMER |
| CT151 | 614 007 6356 | TRIMMER |
| CT152 | 614 007 6356 | TRIMMER |
| CT153 | 614 007 6332 | TRIMMER |
| CT154 | 614 007 6332 | TRIMMER |
| T101 | 614 028 6922 | FILTER |
| T201 | 614 030 3476 | I.F.T |
| T202 | 614 030 4114 | I.F.T |
| T204 | 614 029 3906 | MX COIL |
| T301 | 614 027 7845 | CHOKE |
| T302 | 614 027 7845 | CHOKE |
| L101 | 614 034 9870 | VHF COIL |
| L102 | 614 034 9887 | VHF COIL |
| L103 | 614 028 4058 | FILTER |
| L104 | 614 035 0036 | VHF COIL |
| L105 | 614 034 8286 | VHF COIL (W.GERMANY) |
| L121 | 614 034 7135 | VHF COIL (W.GERMANY) |
| L122 | 614 034 7135 | VHF COIL (W.GERMANY) |
| L151 | 614 033 8904 | O.S.C COIL |
| L152 | 614 197 4002 | ANT COIL |
| L153 | 614 034 1003 | O.S.C COIL |
| L154 | 614 197 3975 | ANT COIL |
| L155 | 614 028 4379 | FILTER |
| X201 | 614 030 5128 | I.F FILTER |
| X202 | 614 030 5128 | I.F FILTER |
| X203 | 614 030 5128 | I.F FILTER |
| X204 | 614 030 7443 | I.F FILTER |
| X205 | 614 211 2939 | FILTER, 459KHZ |
| VR707 | 614 221 7443 | VR, ROTARY |
| SVR201 | 614 003 3267 | SEMI V.R, 20K |
| or | 614 006 9693 | VR, 20K |

| Ref. No. | Part No. | Description |
|---|---|---|
| SVR202 | 614 003 3250 | SEMI V.R, 10K |
| or | 614 006 9686 | VR, 10K |
| SVR302 | 614 003 3250 | SEMI V.R, 10K |
| or | 614 006 9686 | VR, 10K |
| IC201 | 409 016 2204 | IC LA1265S |
| IC301 | 409 016 9500 | IC LA3361 |
| IC402 | 409 154 0209 | IC TC9172AP |
| IC701 | 409 018 4909 | IC LA6458S |
| IC702 | 409 022 3608 | IC LC7818 |
| IC703 | 409 053 1703 | IC TC9174P |
| IC711 | 409 018 4909 | IC LA6458S |
| Q101 | 405 092 5702 | TR 2SK606-Q |
| Q102 | 405 012 5904 | TR 2SC1923-Y |
| Q103 | 405 012 5904 | TR 2SC1923-Y |
| Q104 | 405 012 5904 | TR 2SC1923-Y |
| Q105 | 405 092 5702 | TR 2SK606-Q |
| Q151 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q152 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q153 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q154 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q155 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q157 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q158 | 405 078 5405 | TR 2SK301-R |
| Q201 | 405 018 7902 | TR 2SC380TM-O |
| Q202 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q301 | 405 012 2002 | TR 2SC1815-GR |
| Q302 | 405 012 2002 | TR 2SC1815-GR |
| Q303 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q304 | 405 016 2206 | TR 2SC2878-A |
| or | 405 016 2305 | TR 2SC2878-B |
| Q351 | 405 001 7001 | TR 2SA1015-GR |
| Q352 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q354 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q355 | 405 001 7001 | TR 2SA1015-GR |
| Q357 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q358 | 405 001 7001 | TR 2SA1015-GR |
| Q361 | 405 001 7001 | TR 2SA1015-GR |
| Q370 | 405 001 7001 | TR 2SA1015-GR |
| Q371 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q372 | 405 001 7001 | TR 2SA1015-GR |
| Q402 | 405 078 4903 | TR 2SC2634-R |
| Q403 | 405 078 4903 | TR 2SC2634-R |
| Q771 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q871 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q904 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q905 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q906 | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| D101 | 407 105 0100 | VARACTOR DI SVC211-B-AL |
| D102 | 407 105 0100 | VARACTOR DI SVC211-B-AL |
| D103 | 407 105 0100 | VARACTOR DI SVC211-B-AL |
| D104 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D151 | 407 091 5004 | VARACTOR DI SVC321SPA-C-2 |
| D152 | 407 091 5004 | VARACTOR DI SVC321SPA-C-2 |
| D201 | 407 012 5809 | DIODE 1SS176 |

| Ref. No. | Part No. | Description |
|---|---|---|
| D201 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D301 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D302 | 407 005 4505 | DIODE DS442X |
| or | 407 013 1701 | DIODE 1S1588 |
| or | 407 013 7109 | DIODE 1S2473 |
| D351 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D352 | 407 053 8807 | ZENER DIODE MTZ9.1B |
| D401 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D430 | 407 053 6704 | ZENER DIODE MTZ5.6B |
| D913 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D914 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D915 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D916 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D917 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D918 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D919 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D920 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D921 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D922 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D923 | 407 053 7107 | ZENER DIODE MTZ6.2B |
| D924 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D950 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| C51 | 403 062 5103 | POLYESTER 5600P K 50V (W.GERMANY) |
| C52 | 403 062 5103 | POLYESTER 5600P K 50V (W.GERMANY) |
| C53 | 403 062 5103 | POLYESTER 5600P K 50V (W.GERMANY) |
| C54 | 403 062 5103 | POLYESTER 5600P K 50V (W.GERMANY) |
| C154 | 403 082 2205 | POLYPRO 560P J 100V |
| C155 | 403 082 2007 | POLYPRO 510P J 100V |
| C157 | 403 033 3206 | CERAMIC 82P J 50V, NPO |
| C306 | 403 080 5000 | POLYPRO 1000P J 100V |
| C407 | 403 106 1603 | NP-ELECT 1U Q 50V |
| C734 | 403 057 3800 | POLYESTER 0.1U M 50V |
| C735 | 403 057 3800 | POLYESTER 0.1U M 50V |
| C834 | 403 057 3800 | POLYESTER 0.1U M 50V |
| C835 | 403 057 3800 | POLYESTER 0.1U M 50V |
| R380 | ⚠ 401 018 1209 | CARBON 33 JB 1/4W |
| R743 | ⚠ 401 010 5601 | CARBON 5.6 JB 1/2W |
| R744 | ⚠ 401 009 5506 | CARBON 330 JB 1/2W |
| R843 | ⚠ 401 010 5601 | CARBON 5.6 JB 1/2W |
| R844 | ⚠ 401 009 5506 | CARBON 330 JB 1/2W |

## FRONT PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 75 | 614 221 4428 | ASSY, PCB, FRONT (ITALY) |
| or | 614 225 6770 | ASSY, PCB, FRONT (W.GERMANY) |
| | 614 221 2448 | SWITCH, PUSH |
| | 614 208 2287 | PLUG, FRONT-PRE 1 |
| | 614 208 2249 | PLUG, FRONT-PRE 2 |

| Ref. No. | Part No. | Description |
|---|---|---|
| | 614 208 2256 | PLUG, FRONT-PRE 3 |
| | 614 208 2263 | PLUG, FRONT-PRE 4 |
| | 614 020 6586 | SOCKET, 6P |
| | 614 216 9285 | MOUNT-E |
| | 614 220 3651 | SHEET |
| | 614 112 2328 | DOUBLE FACE |
| | 614 217 2612 | LCD |
| | 614 035 4928 | SOCKET, 3P |
| X401 | 614 008 0063 | CRYSTAL, 7.2MHZ |
| or | 614 204 0317 | CRYSTAL |
| S401 | 614 220 5655 | SWITCH, TACT |
| S402 | 614 220 5655 | SWITCH, TACT |
| S403 | 614 220 5655 | SWITCH, TACT |
| S404 | 614 220 5655 | SWITCH, TACT |
| S405 | 614 220 5655 | SWITCH, TACT |
| S406 | 614 220 5655 | SWITCH, TACT |
| S407 | 614 220 5655 | SWITCH, TACT |
| S408 | 614 220 5655 | SWITCH, TACT |
| S409 | 614 220 5655 | SWITCH, TACT |
| S410 | 614 220 5655 | SWITCH, TACT |
| S902 | 614 220 5655 | SWITCH, TACT |
| S903 | 614 220 5655 | SWITCH, TACT |
| S904 | 614 220 5655 | SWITCH, TACT |
| S905 | 614 220 5655 | SWITCH, TACT |
| S906 | 614 220 5655 | SWITCH, TACT |
| VR701 | 614 221 4756 | VR, SLIDE |
| VR702 | 614 221 4756 | VR, SLIDE |
| VR703 | 614 221 4756 | VR, SLIDE |
| VR704 | 614 221 4756 | VR, SLIDE |
| VR705 | 614 221 4756 | VR, SLIDE |
| VR706 | 614 003 5766 | V.R |
| VR801 | 614 221 4756 | VR, SLIDE |
| VR802 | 614 221 4756 | VR, SLIDE |
| VR803 | 614 221 4756 | VR, SLIDE |
| VR804 | 614 221 4756 | VR, SLIDE |
| VR805 | 614 221 4756 | VR, SLIDE |
| CN401 | 614 035 4911 | SOCKET |
| IC401 | 410 064 8407 | IC TC9306F-045 BS |
| IC721 | 409 018 4909 | IC LA6458S |
| IC761 | 409 003 0305 | IC BA6137 |
| IC861 | 409 003 0305 | IC BA6137 |
| Q404 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| D402 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D403 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D404 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D405 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D406 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D407 | 407 012 5809 | DIODE 1SS176 |
| or | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D408 | 407 005 4505 | DIODE DS442X |
| or | 407 013 1701 | DIODE 1S1588 |
| or | 407 013 7109 | DIODE 1S2473 |
| D409 | 407 005 4505 | DIODE DS442X |
| or | 407 013 1701 | DIODE 1S1588 |
| or | 407 013 7109 | DIODE 1S2473 |
| D410 | 407 005 4505 | DIODE DS442X |
| or | 407 013 1701 | DIODE 1S1588 |
| or | 407 013 7109 | DIODE 1S2473 |
| D411 | 407 005 4505 | DIODE DS442X |
| or | 407 013 1701 | DIODE 1S1588 |
| or | 407 013 7109 | DIODE 1S2473 |

| Ref. No. | Part No. | Description |
|---|---|---|
| D431 | 407 007 9904 | DIODE GMA01 |
| D761 | 408 008 9108 | LED SLR-56VC70F130-N |
| D762 | 408 008 9108 | LED SLR-56VC70F130-N |
| D763 | 408 008 9108 | LED SLR-56VC70F130-N |
| D764 | 408 008 9108 | LED SLR-56VC70F130-N |
| D765 | 408 008 9108 | LED SLR-56VC70F130-N |
| D861 | 408 008 9108 | LED SLR-56VC70F130-N |
| D862 | 408 008 9108 | LED SLR-56VC70F130-N |
| D863 | 408 008 9108 | LED SLR-56VC70F130-N |
| D864 | 408 008 9108 | LED SLR-56VC70F130-N |
| D865 | 408 008 9108 | LED SLR-56VC70F130-N |
| D933 | 408 008 9108 | LED SLR-56VC70F130-N |
| D934 | 408 008 9108 | LED SLR-56VC70F130-N |
| D935 | 408 008 9108 | LED SLR-56VC70F130-N |
| D936 | 408 008 9108 | LED SLR-56VC70F130-N |
| D937 | 408 008 9108 | LED SLR-56VC70F130-N |
| C401 | 403 019 0403 | CERAMIC 24P J 50V, NPO |
| C402 | 403 019 0403 | CERAMIC 24P J 50V, NPO |
| C410 | 403 196 9602 | DL-ELECT 0.047F Z 5.5V |

## LAMP PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 76 | 614 221 4435 | ASSY, PCB, LAMP (ITALY) |
| or | 614 225 6787 | ASSY, PCB, LAMP (W.GERMANY) |
| CN402 | 614 035 4911 | SOCKET, 2P |
| D441 | 407 129 1107 | LED SLP-880A-51 |
| D442 | 407 129 1107 | LED SLP-880A-51 |
| D443 | 407 129 1107 | LED SLP-880A-51 |

## LED PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 95 | 614 225 7524 | ASSY, PCB, LED (ITALY) |
| or | 614 224 4050 | ASSY, PCB, LED (W.GERMANY) |
| CN711 | 614 225 0129 | ASSY, CONNECTOR-S |
| D962 | 407 134 8009 | LED SLC-22VR5F-G |
| or | 407 134 8108 | LED SLC-22VR5F-H |

## DECK AMP PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 77 | 614 221 4947 | ASSY, PCB, DECK AMP |
| L501 | 614 029 3807 | MX COIL |
| L502 | 614 027 8545 | CHOKE |
| or | 614 210 3685 | INDUCTOR, FERITE |
| L511 | 614 202 8865 | FILTER |
| L512 | 614 029 3142 | MX COIL |
| L601 | 614 029 3807 | MX COIL |
| L602 | 614 027 8545 | CHOKE |
| or | 614 210 3685 | INDUCTOR, FERITE |
| L611 | 614 202 8865 | FILTER |
| L612 | 614 029 3142 | MX COIL |
| L981 | 614 224 3367 | TRANS, OSC |
| SVR1 | 614 003 3090 | SEMI V.R, 20K |
| SVR501 | 614 003 6183 | SEMI V.R, 10K |
| SVR502 | 614 003 6183 | SEMI V.R, 10K |
| SVR503 | 614 003 6183 | SEMI V.R, 10K |
| SVR504 | 614 003 6220 | SEMI V.R, 100K |
| SVR601 | 614 003 6183 | SEMI V.R, 10K |
| SVR602 | 614 003 6183 | SEMI V.R, 10K |
| SVR603 | 614 003 6183 | SEMI V.R, 10K |
| SVR604 | 614 003 6220 | SEMI V.R, 100K |
| CN1 | 614 017 2102 | PLUG, 3P |
| or | 614 020 8870 | SOCKET, 6P |
| CN2 | 614 017 2133 | PLUG, 6P |
| or | 614 020 8917 | SOCKET, 10P |
| CN5 | 614 016 4084 | PLUG, 2P |

| Ref. No. | Part No. | Description |
|---|---|---|
| CN6 | 614 020 8849 | SOCKET, TAPE OUT |
| CN7 | 614 223 9223 | SOCKET, MOTOR |
| CN8 | 614 223 9209 | SOCKET, STOP SW |
| CN9 | 614 227 3623 | ASSY, CONNECTOR-S |
| CN10 | 614 224 2650 | ASSY, CONNECTOR-S |
| CN717 | 614 020 8870 | SOCKET, 6P |
| CN718 | 614 020 8917 | SOCKET, 10P |
| IC1 | 409 020 9107 | IC LC4069UB |
| or | 409 051 3907 | IC TC4069UBP |
| or | 409 059 3206 | IC UPD4069UBC |
| IC501 | 409 121 8702 | IC LA3246 |
| IC502 | 409 145 8405 | IC UPC1330HA |
| IC521 | 409 016 8701 | IC LA3220 |
| IC551 | 409 119 9803 | IC CXA1101P |
| Q1 | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| Q2 | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| Q3 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q4 | 405 001 7001 | TR 2SA1015-GR |
| or | 405 005 2002 | TR 2SA733-P |
| Q5 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q6 | 405 012 7403 | TR 2SC2001-K |
| or | 405 013 1301 | TR 2SC2120-Y |
| Q8 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q9 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q10 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q501 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q502 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q504 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q505 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q506 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q507 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q508 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q509 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q510 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q601 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q602 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q604 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q605 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q606 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q607 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q608 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q609 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q981 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q982 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q983 | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q984 | 405 011 8609 | TR 2SC1740S-S |
| or | 405 012 2002 | TR 2SC1815-GR |
| or | 405 020 7204 | TR 2SC945A-K |
| Q985 | 405 011 1907 | TR 2SC1627-Y |
| D1 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D2 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D3 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D4 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D5 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D6 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D7 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D8 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D9 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D10 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D11 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D12 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D13 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D14 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D15 | 407 005 4505 | DIODE DS442X |
| or | 407 013 7109 | DIODE 1S2473 |
| D16 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D17 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D18 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D19 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D99 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D501 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D502 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D601 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D602 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |

| Ref. No. | Part No. | Description |
|---|---|---|
| C985 | 403 080 9602 | POLYPRO 0.015U J 100V |
| R981 | ⚠ 402 004 4303 | FUSIBLE RES 10 J- 1/4W |

## STOP SW PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 78 | 614 221 4954 | ASSY, PCB, STOP SW |
| | 614 203 7911 | SWITCH, STOP SW |
| CN58 | 614 223 9209 | SOCKET |

## IR PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 79 | 614 224 2643 | ASSY, PCB, IR (ITALY) |
| or | 614 225 6794 | ASSY, PCB, IR (W.GERMANY) |
| | 614 035 4928 | SOCKET, 3P |
| S411 | 614 217 8935 | SWITCH |

## MOTOR REG PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 80 | 614 224 9529 | ASSY, PCB, MOTOR REG (ITALY) |
| or | 614 225 6800 | ASSY, PCB, MOTOR REG (W.GERMANY) |
| | 614 020 6555 | SOCKET, 3P |
| | 614 223 9216 | SOCKET |
| IC904 | 409 078 2402 | IC L7812ML |
| or | 409 122 6202 | IC NJM7812FA |
| or | 409 168 2107 | IC UPC7812HF |
| or | 409 001 7603 | IC AN7812F |

## CD MAIN PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 81 | 614 222 9125 | ASSY, PCB, CD MAIN |
| | 614 121 5891 | HEAT SINK |
| | 614 121 6829 | HEAT SINK |
| | 614 211 2991 | SOCKET |
| T1101 | 614 194 3596 | FILTER |
| T1102 | 614 194 3619 | O.S.C COIL |
| L1401 | 614 028 4133 | FILTER |
| L1701 | 614 028 4256 | FILTER |
| X1301 | 614 215 5523 | RESONATOR, 4.19MHZ |
| or | 614 215 5561 | RESONATOR |
| X1401 | 614 215 5509 | RESONATOR |
| or | 614 215 5547 | RESONATOR, 8.64MHZ |
| SVR1102 | 614 223 1944 | POTENTIOMETER |
| SVR1104 | 614 223 1913 | POTENTIOMETER |
| CN705 | 614 020 1222 | SOCKET |
| CN710 | 614 020 8849 | SOCKET |
| CN715 | 614 035 5963 | SOCKET |
| CN1001 | 614 017 2577 | PLUG |
| CN1002 | 614 220 2739 | PLUG |
| CN1003 | 614 017 2553 | PLUG |
| CN1004 | 614 017 2546 | PLUG |
| CN1007 | 614 035 5994 | SOCKET |
| CN1008 | 614 035 6007 | SOCKET |
| TP12 | 614 016 3858 | PLUG |
| TP14 | 614 016 3858 | PLUG |
| or | 614 016 3865 | PLUG |
| TP18 | 614 016 3858 | PLUG |
| IC5 | ⚠ 409 189 4203 | IC M5278D05 |
| or | ⚠ 409 224 2102 | IC AN79N05 |
| IC1101 | 409 124 6507 | IC LA9200NM |
| IC1201 | ⚠ 409 018 5500 | IC LA6510 |

| Ref. No. | Part No. | Description |
|---|---|---|
| IC1202 | ⚠ 409 018 5500 | IC LA6510 |
| IC1301 | 410 099 9608 | IC CXP5046H-225S |
| IC1401 | 409 200 0702 | IC LC7860KA |
| IC1402 | 409 123 7109 | IC LC3517BS-15 |
| or | 409 209 0307 | IC UM6116K-2 |
| IC1501 | 409 136 7509 | IC LC7881-C |
| IC1601 | ⚠ 409 189 4203 | IC M5278D05 |
| IC1602 | ⚠ 409 224 2102 | IC AN79N05 |
| Q1101 | 405 080 7107 | TR DTA113ZS |
| Q1201 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1202 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1203 | 405 001 0309 | TR RN1203 |
| or | 405 000 4407 | TR DTC124ES |
| Q1206 | 405 033 6805 | TR 2SD1468S-S |
| Q1207 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1300 | 405 001 0309 | TR RN1203 |
| or | 405 000 4407 | TR DTC124ES |
| Q1301 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1302 | 405 001 0309 | TR RN1203 |
| or | 405 000 4407 | TR DTC124ES |
| Q1303 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1323 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1324 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1325 | 405 002 1305 | TR 2SA1048-Y |
| or | 405 006 1806 | TR 2SA933S-R |
| or | 405 006 1905 | TR 2SA933S-S |
| Q1326 | 405 099 1004 | TR 2SD592-S |
| or | 405 099 7501 | TR 2SD592-R |
| Q1327 | 405 099 0908 | TR 2SB621-S |
| or | 405 099 7303 | TR 2SB621-R |
| Q1501 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1502 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1503 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1504 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1505 | 405 014 5209 | TR 2SC2458GR |
| or | 405 011 8500 | TR 2SC1740S-R |
| or | 405 011 8609 | TR 2SC1740S-S |
| Q1602 | 405 001 0309 | TR RN1203 |
| or | 405 000 4407 | TR DTC124ES |
| D1101 | 407 105 0100 | VARACTOR DI SVC211-B-AL |
| D1103 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1104 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1105 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1106 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1201 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1202 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |

| Ref. No. | Part No. | Description |
|---|---|---|
| D1301 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1302 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1314 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1601 | 407 004 9105 | DIODE DSF10C |
| or | 407 012 3300 | DIODE 1SR35-200A |
| D1602 | 407 004 9105 | DIODE DSF10C |
| or | 407 012 3300 | DIODE 1SR35-200A |
| D1603 | 407 004 9105 | DIODE DSF10C |
| or | 407 012 3300 | DIODE 1SR35-200A |
| D1604 | 407 004 9105 | DIODE DSF10C |
| or | 407 012 3300 | DIODE 1SR35-200A |
| D1609 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1610 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| C1117 | 403 067 6204 | MT-COMPO 0.15U J 50V |
| C1133 | 403 080 5000 | POLYPRO 1000P J 100V |
| C1235 | 403 154 2102 | NP-ELECT 1U M 50V, NPO |
| C1507 | 403 062 5103 | POLYESTER 5600P K 50V |
| C1508 | 403 062 5103 | POLYESTER 5600P K 50V |
| C1511 | 403 056 7908 | POLYESTER 1000P K 50V |
| C1512 | 403 056 7908 | POLYESTER 1000P K 50V |
| C1606 | 403 043 3104 | ELECT 2200U M 16V |
| C1607 | 403 043 3104 | ELECT 2200U M 16V |
| R1601 | ⚠ 402 046 7102 | RESISTOR 1 J- 1/2W |
| R1602 | ⚠ 402 046 7102 | RESISTOR 1 J- 1/2W |

## CD SW PCB ASSY

| Ref. No. | Part No. | Description |
|---|---|---|
| 82 | 614 222 9149 | ASSY, PCB, CD SW |
| S1701 | 614 220 5631 | SWITCH, TACT |
| S1702 | 614 220 5631 | SWITCH, TACT |
| S1703 | 614 220 5631 | SWITCH, TACT |
| S1704 | 614 220 5631 | SWITCH, TACT |
| S1705 | 614 220 5631 | SWITCH, TACT |
| S1706 | 614 220 5631 | SWITCH, TACT |
| S1707 | 614 220 5631 | SWITCH, TACT |
| S1708 | 614 220 5631 | SWITCH, TACT |
| CN1007 | 614 035 4973 | SOCKET, 8P |
| CN1008 | 614 035 4980 | SOCKET, 9P |
| Q1701 | 405 082 4609 | TR DTA123YS |
| Q1702 | 405 082 4609 | TR DTA123YS |
| Q1703 | 405 082 4609 | TR DTA123YS |
| D1701 | 407 081 5106 | LED SL-1283-20 |
| D1702 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1703 | 407 007 9904 | DIODE GMA01 |
| or | 407 012 4406 | DIODE 1SS133 |
| D1704 | 408 011 8709 | LED SLR-56MC70F130-P |
| or | 408 012 1808 | LED SLR-56MC70F130-Q |
| D1705 | 408 008 9108 | LED SLR-56VC70F130-N |
| or | 408 008 9207 | LED SLR-56VC70F130-P |
| D1706 | 408 008 9108 | LED SLR-56VC70F130-N |
| or | 408 008 9207 | LED SLR-56VC70F130-P |
| D1707 | 408 011 8709 | LED SLR-56MC70F130-P |
| or | 408 012 1808 | LED SLR-56MC70F130-Q |
| D1708 | 408 008 9108 | LED SLR-56VC70F130-N |
| or | 408 008 9207 | LED SLR-56VC70F130-P |
| D1709 | 408 008 9108 | LED SLR-56VC70F130-N |
| or | 408 008 9207 | LED SLR-56VC70F130-P |
| D1710 | 408 008 9108 | LED SLR-56VC70F130-N |
| or | 408 008 9207 | LED SLR-56VC70F130-P |

## MECHANISM

| Ref. No. | Part No. | Description |
|---|---|---|
| M1 | 614 216 9766 | GEAR, PICK UP RACK UPPER |
| M2 | 614 216 9896 | SPRING, COMP, RACK BACK |
| M3 | 614 216 9759 | GEAR, PICK UP RACK LOWER |
| M4 | 614 216 9858 | LEVER, CHUCK |
| M5 | 614 211 6654 | SPRING PLATE, CHUCK |
| M6 | 614 219 0104 | ASSY, PULLEY, CHUCK |
| M7 | 614 216 9728 | CHASSIS |
| M8 | 614 045 2105 | COMMUTATE MOTOR, SPINDLE |
| M9 | 614 216 9841 | TURNTABLE |
| M10 | 614 216 9742 | GEAR, CHANGE SLIDE |
| M11 | 614 216 9810 | GEAR, CHANGE RACK |
| M12 | 614 216 9865 | SLIDE, DRIVING |
| M13 | ⚠ 614 218 6855 | PICKUP, LASER |
| M14 | 614 145 9622 | SHAFT, PICK UP GUIDE |
| M15 | 614 217 7068 | COMMUTATE MOTOR ASSY, SLED |
| M16 | 614 216 9797 | GEAR, CLUTCH INNER |
| M17 | 614 216 9780 | GEAR, CLUTCH OUTER |

| Ref. No. | Part No. | Description |
|---|---|---|
| M18 | 614 216 9889 | SPRING, TENS |
| M19 | 614 223 2217 | SPRING, TENS, CHUCK LEVER BACK |
| M20 | 614 216 9773 | GEAR, TRAY SLED |
| M21 | 614 216 9803 | GEAR, PICK UP SLED |
| M22 | 614 018 9223 | SWITCH, LIMIT OR LOAD OUT |
| M23 | 614 221 7993 | ASSY, CONNECTOR-S, 3P |
| M25 | 614 221 8006 | ASSY, CONNECTOR-S, 4P |
| M26 | 614 216 9902 | SPRING, WIRE, CLUTCH |
| M27 | 614 223 4181 | SHEET, TRAY UP |
| M32 | 614 129 4971 | FIXER, LEAD |

## FIXING PARTS (MECHANISM)

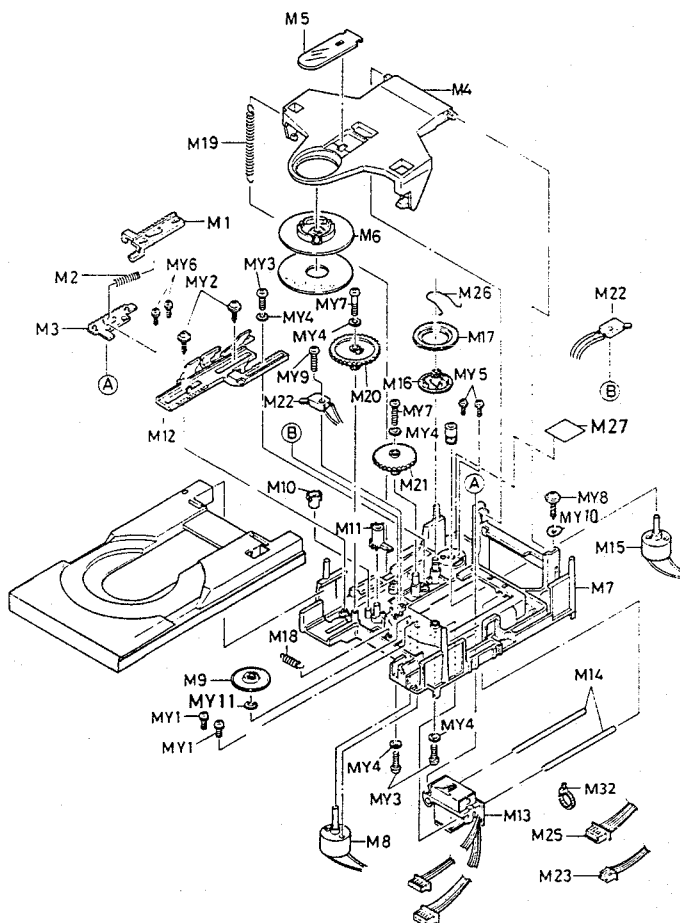| Ref. No. | Part No. | Description |
|---|---|---|
| MY2 | 411 020 9902 | SCR S-TPG BRZ+FLG 3X8, SLIDE FIX |
| MY3 | 411 022 8408 | SCR S-TPG PAN 2X8, SHAFT FIX |
| MY4 | 411 087 4704 | WASHER V 2X6X0.4, SHAFT FIX |
| MY5 | 411 044 7205 | SCR PAN+SW 2X4, MOTOR FIX |
| MY6 | 411 044 7502 | SCR PAN+SW 2X5, RACK FIX |
| MY7 | 411 119 8908 | SCR S-TPG PAN 2X14, GEAR FIX |
| MY8 | 411 020 9100 | SCR S-TPG BRZ+FLG 3X12, LEVER (EUROPE/SPAIN) |
| or | 412 037 1705 | SCR, SPECIAL (U.K) |
| MY9 | 411 104 4205 | SCR TPG PAN PCS 1.7X8, SW FIX |
| MY10 | 411 092 2900 | WASHER Z 3X10X1, LEVER FIX |
| MY11 | 412 032 0208 | SPECIAL WASHER |

## MECHANISM

| Ref. No. | Part No. | Description |
|---|---|---|
| M1 | 614 195 8774 | SLIDE, SW |
| M2 | 614 224 5255 | SLIDE, LOCK |
| M3 | 614 195 8781 | SLIDE, R/F |
| M4 | 614 195 8699 | SLIDE, EJECT |
| M5 | 614 209 8486 | SLIDE, REC |
| M6 | 614 195 8743 | SLIDE, PLAY |
| M7 | 614 209 8493 | SLIDE, MR |
| M8 | 614 209 8455 | SLIDE, STOP |
| M9 | 614 210 7331 | SLIDE ASSY |
| M10 | 614 209 8479 | SLIDE, REW |
| M11 | 614 209 8462 | SLIDE, FF |
| M12 | 614 195 8873 | BRACKET SLIDE |
| M13 | 411 021 0809 | SCR S-TPG BIN 2X6 |
| M14 | 411 022 7807 | SCR S-TPG PAN 2X6 |
| M15 | 614 200 6535 | SPRING WIRE, STOP/ PAUSE/REW FF RESET |
| M16 | 614 200 6528 | SPRING WIRE, R/P RESET |
| M17 | 614 200 6542 | SPRING WIRE |
| M18 | 614 200 6559 | SPRING WIRE, SW/R.F SLIDE |
| M19 | 614 195 8866 | SLIDE, KICK LEVER |
| M20 | 412 031 2104 | SPECIAL SCREW |
| M22 | 411 022 7500 | SCR S-TPG PAN 2X4 |
| M23 | 614 200 6450 | SPRING COIL |
| M24 | 411 028 3308 | SCR S-TPG PAN 2X8 |
| M25 | 614 195 8880 | LEVER, MISS REC A |
| M26 | 614 205 3690 | LEVER ASSY |
| M27 | 614 205 6295 | PIPE |
| M28 | 411 121 9900 | SCR TPG PAN PCS 1.7X6 |
| M29 | 614 205 3706 | LEVER ASSY, A/B LEVER |
| M30 | 614 195 8828 | SLIDE |
| M31 | 614 195 9054 | LEVER, MANUAL REVERSE SW |
| M32 | 614 195 8903 | LEVER, MODE CHANGE |
| M33 | 614 200 6580 | SPRING WIRE |
| M34 | 614 195 9030 | LEVER (R/F) |
| M35 | 614 195 9023 | LEVER (A/B) |
| M36 | 412 031 2104 | SPECIAL SCREW |
| M37 | 614 197 1643 | TAPE GUIDE |
| M38 | 614 198 2724 | PIPE, PROTECTOR |
| M39 | 411 038 8904 | SCR PAN 2X2, TAPE GUIDE |
| M40 | 614 211 9341 | BRACKET-M, PROTECTOR |
| M41 | 411 086 9205 | WASHER IN TW 2 |
| M42 | 411 002 4703 | SCR PAN 2X16, PROTECTOR |
| M43 | 614 195 8910 | LEVER, TRIGGER |
| M44 | 614 195 8941 | LEVER |
| M45 | 614 200 6597 | SPRING WIRE, PLAY SLIDE RESET |
| M46 | 614 205 3669 | SLIDE ASSY |
| M47 | 614 200 6436 | SPRING COIL, ROCK LEVER |
| M48 | 614 205 3676 | LEVER ASSY |
| M49 | 614 200 6399 | SPRING COIL |
| M50 | 614 195 8606 | GEAR, D, G |
| M51 | 412 031 1503 | SPECIAL WASHER |
| M52 | 614 195 8644 | PULLEY |
| M53 | 412 012 6701 | SPECIAL WASHER |
| M54 | 412 022 0607 | SPECIAL WASHER, PULLEY FIX |
| M55 | 614 207 7665 | LEVER, MODE CHANGE |
| M56 | 614 197 7737 | PULLEY |
| M57 | 614 205 3638 | GEAR ASSY |
| M58 | 614 209 0251 | SPRING COIL, TUT |
| M59 | 614 195 9108 | BRACKET SPRING |
| M60 | 614 200 6481 | SPRING COIL |
| M61 | 614 195 8972 | LEVER, SENSOR |
| M62 | 412 031 1701 | SPECIAL WASHER |
| M63 | 614 195 8552 | GEAR |
| M64 | 614 205 3645 | PULLEY ASSY |
| M67 | 614 200 6498 | SPRING COIL, TUT |
| M69 | 412 012 8606 | SPECIAL WASHER, SENSOR THRUST |
| or | 614 129 9341 | LUG, LEAD FIX |
| M70 | 614 205 3577 | CHASSIS ASSY |
| M71 | 614 195 9061 | LEVER, CUE/REV |
| M72 | 614 195 8576 | GEAR, FF RELAY |
| M73 | 614 205 3683 | LEVER ASSY |
| M74 | 614 197 1629 | SLIDE, DIRECTION DISPLAY |

| Ref. No. | Part No. | Description |
|---|---|---|
| M75 | 614 215 3222 | SLIDE ASSY |
| M76 | 614 210 5900 | HEAD, R/P |
| M77 | 411 028 2905 | SCR S-TPG PAN 2X4 |
| M78 | 614 195 8897 | LEVER, MISS REC B |
| M79 | 614 195 9139 | SPRING PLATE |
| M80 | 614 197 1599 | BRACKET SWITCH |
| M81 | 411 020 1104 | SCR PAN PCS 1.7X5, SW FIX |
| M82 | 614 195 7104 | SWITCH, DIRECTION DISPLAY |
| M83 | 614 195 8811 | SLIDE, B MISS REC |
| M84 | 614 200 6412 | SPRING COIL |
| M85 | 614 195 8804 | SLIDE, KICK LEVER |
| M86 | 614 205 3621 | LEVER PINCH ROLLER ASSY |
| or | 614 200 6566 | SPRING WIRE, KICK LEVER RESET |
| M87 | 614 222 9842 | LEVER PINCH ROLLER ASSY |
| M88 | 614 205 4703 | COMMUTATE MOTOR ASSY |
| M89 | 411 124 9204 | SCR PAN PCS 1.6X6, HEAD |
| M90 | 614 200 6634 | SPRING WIRE |
| M91 | 614 200 6627 | SPRING WIRE |
| M92 | 614 200 6405 | SPRING COIL |
| M93 | 614 195 8613 | GEAR, SELECTOR |
| M94 | 614 205 3591 | FLYWHEEL ASSY |
| M95 | 614 223 8073 | ASSY, CONNECTOR-S |
| M96 | 614 198 1963 | SQUARE BELT, SUB |
| M97 | 614 205 3584 | BRACKET HEAD ASSY |
| M98 | 614 208 4069 | HEAD, PLAY |
| M99 | 614 212 9340 | SPRING WIRE |
| M100 | 614 200 6504 | SPRING WIRE, PINCH WIRE |
| M101 | 614 205 4192 | SPRING WIRE, PINCH RESET |
| M102 | 614 195 9078 | LEVER, TIMER LEVER |
| M103 | 614 222 9897 | SPRING COIL, LEVER FIX |
| M104 | 614 200 6511 | SPRING WIRE |
| M106 | 614 201 3175 | PIPE, GEAR FIX |
| M107 | 614 200 6573 | SPRING WIRE, CLICK |
| M108 | 411 002 1702 | SCR FLT 2X8 |
| M109 | 614 201 0624 | SPRING COIL, AZIMUTH |
| M110 | 412 031 2005 | SPECIAL SCREW, AZIMUTH |
| M111 | 614 224 4647 | P.C BOARD |
| M112 | 614 207 7627 | BRACKET-E, NOISE |
| M113 | 411 048 4507 | SCR PAN+FLG 2X3, PCB FIX |
| M114 | 412 012 7104 | SPECIAL WASHER |
| M115 | 614 197 2954 | PIPE |
| M116 | 614 197 2978 | LEVER, PAUSE LOCK |
| M117 | 614 201 3182 | SPRING COIL |
| M118 | 614 195 8989 | LEVER, CONT. PLAY |
| M119 | 614 195 8415 | BRACKET MOTOR |
| M120 | 411 021 2704 | SCR S-TPG BIN 2.6X6 |
| M121 | 614 204 5299 | LEVER, PAUSE |
| M122 | 614 205 3607 | FLYWHEEL ASSY |
| M123 | 412 012 7609 | SPECIAL WASHER, 3.1X5.4X0.25 |
| M124 | 614 195 8620 | GEAR |
| M125 | 614 198 1956 | SQUARE BELT |
| or | 614 152 1299 | SPRING WIRE |
| M126 | 614 204 8771 | LEVER, SENSOR |
| M127 | 614 209 3849 | SWITCH, LEAF, AUTO CROM SWATTCH |
| M128 | 412 023 0903 | SPECIAL SCREW, SW FIX |
| M130 | 614 126 6831 | CUSHION |
| M131 | 412 026 1907 | SPECIAL SCREW |
| M134 | 614 140 1522 | LEVER, EJECT SLIDE |
| M135 | 614 140 1539 | LEVER, E KICK |
| M136 | 614 196 0555 | LEVER, PLAY BUTTON |
| M140 | 614 196 0524 | LEVER, FF BUTTON |
| M142 | 614 196 0531 | LEVER, STOP BUTTON |
| M143 | 614 211 3608 | LEVER, PAUSE BUTTON |
| M144 | 614 205 5403 | SLIDE, PUSH BUTTON ACTUATOR |
| M145 | 614 201 1744 | SLIDE, SWITCH ACTUATOR |
| M146 | 614 211 3615 | LEVER, PAUSE |
| M147 | 614 129 0669 | BOSS, PAUSE STOPPER |
| M148 | 614 151 7186 | SPRING COIL, PAUSE LEVER |
| M149 | 614 152 1244 | SPRING WIRE, P CONTROL |
| M150 | 614 152 1251 | SPRING WIRE |
| M151 | 614 152 1268 | SPRING WIRE |
| M152 | 614 152 1275 | SPRING WIRE, E ACTUATOR |
| M153 | 614 152 1282 | SPRING WIRE, P.S. LEVER |

| Ref. No. | Part No. | Description |
|---|---|---|
| M154 | 614 151 8312 | SPRING PLATE, GEAR PLATE |
| M155 | 614 196 0517 | LEVER, REW BUTTON |
| M156 | 614 129 0676 | BOSS, PR STOPPER |
| M158 | 614 024 1693 | SWITCH |
| M159 | 412 026 2201 | SPECIAL SCREW, M2X5 |
| M160 | 412 026 2300 | SPECIAL SCREW, M2X4.5 |
| M161 | 614 134 9053 | GEAR, CAM |
| M162 | 614 140 1614 | LEVER, SENSING |
| M164 | 412 013 5000 | SPECIAL WASHER, 1.2X3.8X0.3 |
| M165 | 614 204 5701 | REEL ASSY, TAKE UP |
| M166 | 614 204 5732 | PULLEY ASSY, RF CLUTCH |
| M167 | 614 067 2770 | CHASSIS ASSY |
| M168 | 614 210 3302 | LEVER PINCH ROLLER ASSY |
| M171 | 614 067 3258 | SUB CHASSIS ASSY |
| M172 | 614 070 0916 | LEVER ASSY, GEAR PLATE |
| M176 | 614 204 8740 | SQUARE BELT, RF |
| M177 | 614 204 8542 | SWITCH, LEAF |
| M179 | 614 204 8672 | FLYWHEEL ASSY |
| M180 | 412 026 2102 | SPECIAL SCREW, M2X3 |
| M184 | 412 026 2508 | SPECIAL WACHER, 2X3.5X0.3 |
| M193 | 614 201 3168 | PIPE |
| M194 | 614 195 8590 | GEAR |
| M197 | 614 133 4127 | SQUARE BELT, MAIN |
| M198 | 412 031 6607 | SPECIAL SCREW, M2X3 |
| M199 | 614 151 7162 | SPRING COIL, AZIMUTH |
| M201 | 614 151 8299 | SPRING PLATE, PACK SPRING |
| M202 | 614 146 5111 | BRACKET TAPE GUIDE, HEAD BASE |
| M203 | 412 026 1501 | SPECIAL SCREW, M2X6 |
| or | 614 134 9046 | GEAR, FF |
| M204 | 412 026 1808 | SPECIAL WASHER, 1.45X3.8X0.5 |
| M205 | 614 211 6944 | SLIDE, HEAD PANEL |
| M206 | 614 210 3432 | SPRING WIRE, PANEL P |
| M210 | 412 026 1709 | SPECIAL SCREW, AZIMUTH, M2X7 |
| M211 | 614 151 4703 | SPRING COIL, PLATE BUTTON LEVER |
| M212 | 614 151 7179 | SPRING COIL, BACK TENSION |
| M218 | 614 204 5695 | REEL ASSY, SUPPLY |
| M251 | 614 200 6467 | SPRING COIL |
| M252 | 614 195 9085 | LEVER, CONT. PLAY |
| M253 | 614 200 6245 | PIPE |
| M281 | 412 005 8101 | SPECIAL SCREW, CONT LEVER |
| M287 | 614 204 6432 | PIPE, GEAR FIX |
| M299 | 614 200 6610 | SPRING WIRE |
| M300 | 614 195 8958 | LEVER, END READY |
| M301 | 614 200 6429 | SPRING COIL |
| M302 | 614 195 8965 | LEVER, END CANCEL |
| M303 | 614 200 6368 | SPRING COIL |
| M304 | 614 200 6443 | SPRING COIL |
| M305 | 614 200 6382 | SPRING COIL, KICK LEVER RESET |
| M306 | 614 200 6375 | SPRING COIL |
| M307 | 614 195 8583 | GEAR |
| M308 | 614 213 5532 | SWITCH, LEAF, MAIN SW |
| M309 | 614 204 5282 | BRACKET, MOTOR LEVER |
| M310 | 614 200 6641 | SPRING WIRE, FIX |
| M312 | 614 200 6603 | SPRING WIRE |
| M313 | 614 195 8927 | LEVER, END DETECT |
| M314 | 412 012 7005 | SPECIAL WASHER |
| M315 | 412 014 3005 | SPECIAL WASHER |
| M316 | 412 029 8200 | SPECIAL WASHER |
| M317 | 412 034 4709 | SPECIAL WASHER |
| M318 | 614 207 6903 | SPRING, TENS, R HEAD BRACKET |
| M319 | 614 222 7954 | SWITCH, LEAF, PAUSE |
| M320 | 614 207 6897 | PIPE |
| M321 | 411 102 3002 | SCR TPG PAN PCS 1.7X4 |
| M322 | 411 002 4901 | SCR PAN 2X4 |

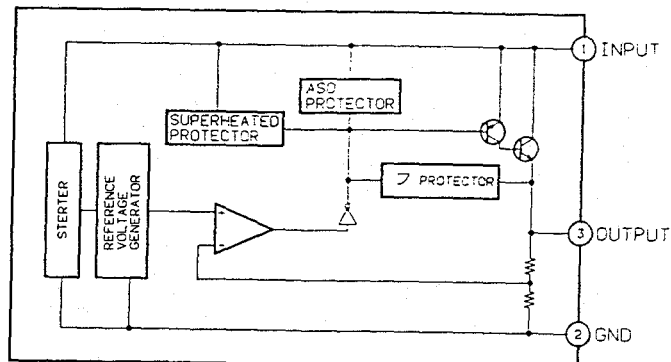IC702 LC7818 (2-Pole 4-Position Analog Function Switch)
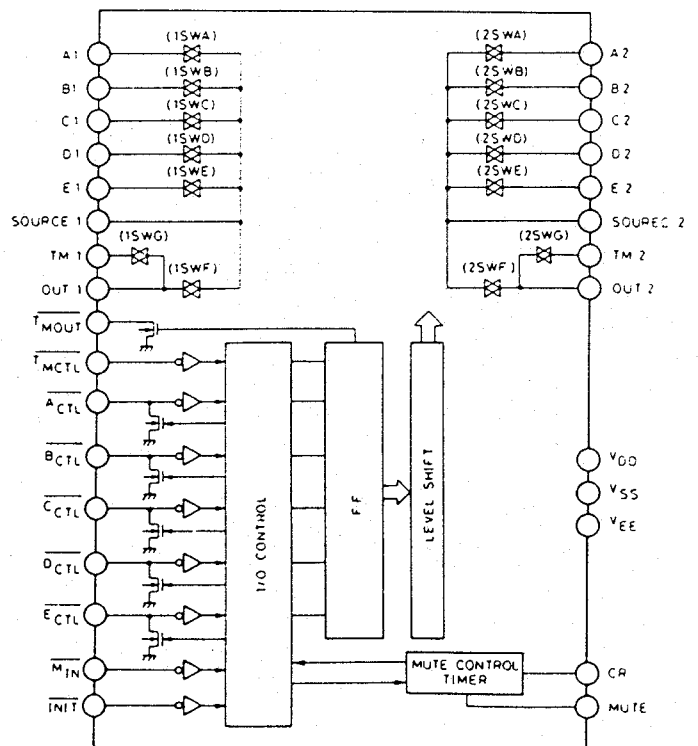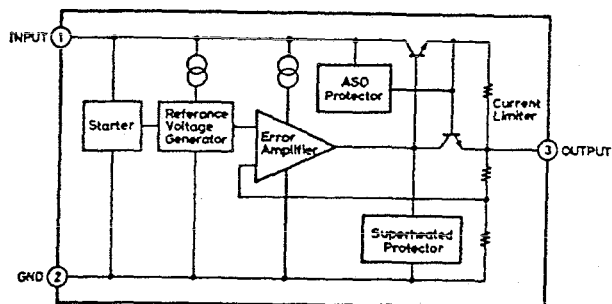
# IC BLOCK DIAGRAM

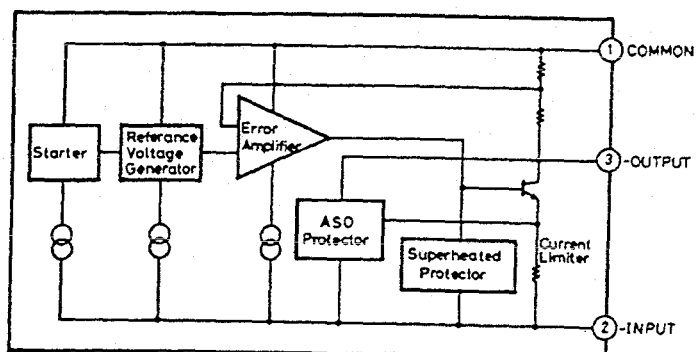## IC501 LA3246 (Pre-Amp Electrical Switch0)
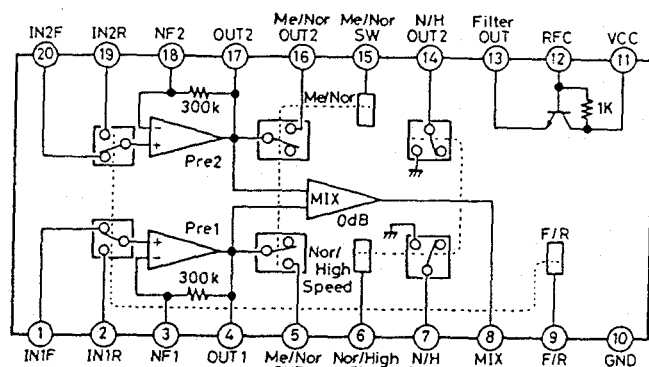


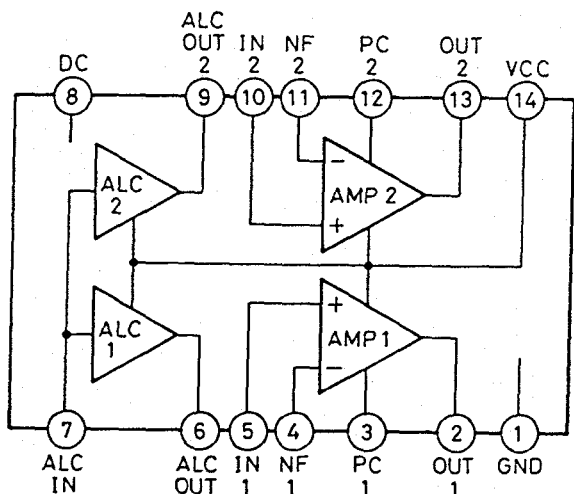## IC1601 M5278D05 (3 TERMINAL VOLTAGE REGULATOR)



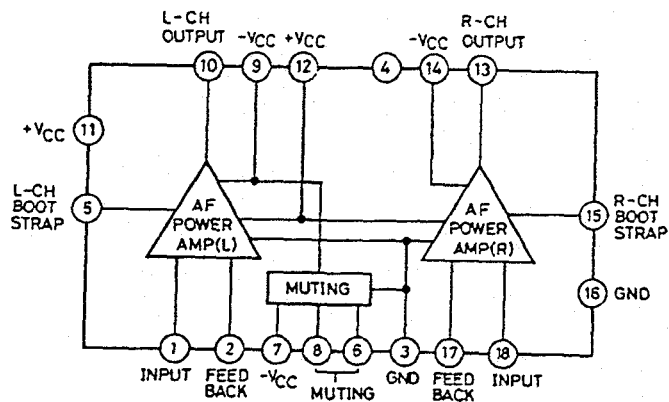## IC903, 904 AN7812F (12V 3-Terminal Constant Voltage Regulated Power supply)



## IC1602 L78M05, IC904 μPC7912HF (3-Terminal Constant Voltage Regulated Power supply)
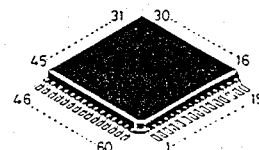


## IC521 LA3220 (Dual Pre-Amplifier)



## IC710 STK4162 Ⅱ (2 channel AF Power Amp.)

# IC BLOCK DIAGRAM

## IC401 TC9306F-045-BS



1. MUTE
2. R-REQ
3. R-DATA
4. CHANGE
5. TIMER
6. STEREO
7. K-4



TC9306F-045
Top View
mini Fp 60 pin

LCD Segment output

## SYSTEM SUMMARY (TC9306F-045)

Combined with PLL LIS TC 9172AP, high efficiency digital tuning system with FM/MW 2-band can be made.

### BAND

| BAND | CODE A B | FREQUENCY (Hz) | STEP (Hz) | Fref (Hz) | IF (Hz) |
|------|----------|----------------|-----------|-----------|---------|
| FM | 0  0 | 87.9  ~ 107.9 M | 200K | 25K | +10.7M |
| | 1  0 | 87.50 ~ 108.00 M | 50K | | 10.7M |
| | 0  1 | 76.0  ~ 90.0 M | 100K | | 10.7M |
| | 1  1 | 87.4  ~ 108.1 M | 50K | | +10.7M |
| MW | 0  0 | 530  ~ 1700 K | 10K | 10K | +450K |
| | 1  0 | 531  ~ 1602 K | | | +459K |
| | 0  1 | 522  ~ 1611 K | 9K | 9K | +459K |
| | 1  1 | 522  ~ 1629 K | | | +450K |
| LW | 1 | 144  ~ 290 K | AUTO MANU 9K/1K | 1K | +459K |
| SW1 | 1  – | 13.2  ~ 7.3 M | 5K | 5K | +450K |
| SW2 | –  1 | 29.5  ~ 21.75 M | | | |

### TC9306F-045

| PORT | No. | NAME | FUNCTION | ACTIVE | FIRST SETTING |
|------|-----|------|----------|--------|---------------|
| MUTE | 41 | MUTE | MUTE OUTPUT | H | H |
| P2–1 | 40 | REM-DATA | REMOTE INPUT | H | – |
| P2–2 | 39 | VR UP | VR UP OUTPUT | H | L |
| P2–3 | 38 | VR DOWN | VR DOWN OUTPUT | H | L |
| P2–4 | 37 | AUTO/MANUAL | AUTO OUTPUT | H | L |
| P3–1 | 36 | TUNED/SD | TUNED & SD INPUT | L | – |
| P3–2 | 35 | STEREO | STEREO INPUT | L | – |

Explanation of terminal functions

| Pin No. | Symbol | Terminal name | Description of function and operation | Remarks |
|---|---|---|---|---|
| 46 | REF | Reference Frequency signal output | Output terminal of reference frequency signal supplied to PLL LSI. It is possible to select one of eight kinds of reference frequency signals (1 kHz, 5 kHz, 9 kHz, 10 kHz, 12 5 kHz, 25 kHz, 50 kHz and 100 kHz) by program. Note: When the INH input is at "L" level, the output is automatically set to "L" level. | |
| 47 | INT | Initialize input | System reset signal input terminal of device. While the INT is at "L" level, resetting is activated. When at "H" level, the program is started from 0 address. Normally, when voltage of 0V 4.5V is applied to VDD, system resetting is activated (power on reset). Therefore, this terminal is used, being set to "H" level. Note: After completion of system resetting, the I/O port is set in input mode. However, since the output state of output port is undefined, it is necessary to initialize the port by using the program as needed | |
| 48 | INH | Inhibit input | Select signal input port of radio mode. It is judged that radio is set in ON mode when input is at "H" level, and radio is set in OFF mode when input is at "L" level. When this terminal is set in "L" level, REF output is automatically fixed at "L" level. When the CKSTP command is used in the program, and this CKSTP command is executed while INH is at "L" level, the clock generator and CPU stop the operations, and the memory backup state is set by using low current (1 A or below). In this case, all output terminals (indication output, output port, etc.) are set automatically to "L" level. Note: The CKSTP command is effective when INH is at "L" level. It is executed when INH is at "H" level, the same operation as that of NOOP command is executed | |
| 49 | TEST | Test mode control input | Test mode control input terminal. The test mode is set when input is at "H" level, and normal operation is executed in "L" level or NC state. This terminal incorporates a pull down resistor. It is normally at "L" level or in NC state. In test mode, the device acts as an evaluation chip, and can evaluate programs on EP ROM base combining with the externally mounted simulation board. | |
| 50 51 | Xt Xt | Quartz oscillator | Connecting terminal of quartz oscillator 7 2 MHz quartz is connected. When the CKSTP command is executed, oscillation is automatically stopped | |
| 52 | GND | Ground terminal | Ground terminal of device | |
| 23 53 | VDD | Power on terminal | Power on terminal of device. In normal operation, voltage of 5V ±10% is applied. In backup state (when CKSTP command is executed), a voltage can be reduced to 2V. Note: Power on resetting is executed when INH is at "L" level When voltage of 0V 4.5V is applied to this terminal, system resetting is activated in the device, the program starts from 0 address (Power on reset) Note: Since the content of each port (output port, internal port, etc.), when power is connected, is undefined, it is necessary to initialize the content by using to the program as needed | |

(Supplement)

○—▷— CMOS input

○—▷○— CMOS output

○—▷—▷ Clocked gate type incorporated CMOS input / incorporated CMOS output

Pull down resistor

| Pin No. | Symbol | Terminal name | Description of function and operation | Remarks |
|---|---|---|---|---|
| 22 | COM1 | LCD common output | Terminal to output common signal output to LCD. It is possible to indicate max. 54 segments by using the matrix S1-S27. At this terminal, three levels of VDD, 1/2 VDD and GND are outputted with intervals of 5 ms at a frequency of 50 Hz. Note: During system resetting or when CKSTP command is executed, output is automatically set to "L" level. | |
| 54 | COM2 | | | |
| 55~60 1~21 | S1~S6 S7~S27 | LCD segment output | Terminal to output segment signal output to LCD. It is possible to indicate max. 54 segments by using the matrix COM1 and COM2. Data is outputted to these terminals by SEG command (COM1 system) and MARK command (COM2 system). For segment decoding, the decode pattern is made in the ROM area, and it is executed by using the DAL command. Note: During system resetting or when CKSTP command is executed, output is automatically set to "L" level. | |
| 24~27 | K0~K3 | Key input port | 4-bit input port for key matrix input. When KEY command which assigns this port at the operand part is executed, data of these terminals are read in to RAM All the terminals incorporate pull down resistor The output ports of T0-T6 are normally used for key return timing signal output | |
| 28~34 | T0~T6 | Key tuning output port | 4 bit (T0-T3) or 3-bit (T4-T6) output port. These ports are normally used for key return timing signal output of key matrix. | |
| 35 | P3 2 /A:D IN | I/O port 3 A:D /analog voltage input | 2-bit I/O port At this port it is possible to assign input and output per bit For this assignment, the content of internal port called PORT 3 I/O CONTROL is used. This terminal is also used for analog input of incorporated 4-bit A/D converter. The switching to A/D converter input is controlled according to the content of PORT-3 I/O CONTROL port. The incorporated A/D converter adopts the programmed successive comparison system in which P3-1 is for reference voltage input, and P3 2 is for analog comparison voltage input | |
| 36 | P3.1 /DC. REF | reference voltage input | | |
| 37~40 | P2 4~ P2 1 | I/O port 2 | 4-bit I/O port. At this port it is possible to assign input and output per bit. For this assignment, the content of internal port called PORT 2 I/O CONTROL port is used. | |
| 41 | MUTE | Muting signal output port | 1 bit output port. This port is normally used for muting control signal output. Note: When the INH input is changed from "H" to "L" or "L" to "H", the output is automatically set to "H" level. | |
| 42 | STB | Strobe pulse output | Serial interface By executing the SIO command, the externally mounted PLL LSI or an optional IC of peripheral part can be controlled. The serial transferring mode, NCD or NCD, can be selected as programmed | |
| 43 | CK | Serial clock output | | |
| 44 | SO | Serial data output | | |
| 45 | SI | Serial data input | | |

# IC BLOCK DIAGRAM

## Pin Function of IC1401 (LC7860N)

| Pin No | Pin Name | I/O | | Functions |
|---|---|---|---|---|
| 1 | TEST1 | I | — | Test pin. Normally not connected. |
| 2 | AO | O | — | VCO is generated by connecting resonance circuit between A1 and AO. (8.6436MHz) is phase output with EFM signal, and is set to increase frequency when +". |
| 3 | A1 | I | — | |
| 4 | PDO | O | — | |
| 5 | Vss | — | — | GND |
| 6 | EFMO | O | — | 1 to 2Vpp HF signal is input to EFMIN. Output from EFMO and BFMO passes through amplitude limiter and reverse phase EFM signal is obtained from both. This performs slice level control. |
| 7 | EFMO | O | — | |
| 8 | EFMIN | I | — | |
| 9 | TEST2 | I | — | Test pin. Normally not connected. |
| 10 | VDD | - | — | +5V |
| 11 | CLV+ | O | — | Disk motor control output |
| 12 | CLV− | O | — | |
| 13 | FOCS | O | — | Focus servo is off when FOCS is HIGH. The lens is lowered by FST and then FST is HIGH, the lens is gradually pulled up. FOCS is reset when FZD is generated. For focus-in. |
| 14 | FST | O | — | |
| 15 | FZD | I | — | |
| 16 | HFL | I | *1 | *1 Kick pulses, JP+ and JP−, are generated according to track jump command. A jump of the prescribed number of tracks is (1, 4, 16 64). |
| 17 | TES | I | *1 | |
| 18 | FSEQ/PCK | O | *2 | *2 When 4.3218MHz PCK monitor terminal/DEMO is HIGH both SYNC detected from EFM signal and SYNC of counter are the same at HIGH. |
| 19 | TOFF | O | *1 | |
| 20 | TGL | O | *1 | |
| 21 | THLD | O | *1 | |
| 22 | JP+ | O | *1 | |
| 23 | JP− | O | *1 | |
| 24 | DEMO | I | — | Set and sount output adjustment pin function. |
| 25 | TEST3 | I | — | Test pin. Normally not connected. |
| 26 | EMPH | O | — | De-emphasis is necessary when HIGH. |
| 27 | DFOFF | I | — | ON/OFF switch for digital filter. No filtering when HIGH. |
| 28 | DSPOFF | I | — | Test pin Normally not connected. |
| 29 | SMP2 | O | *3 | *3 Signal output to DAC and signal for L/R switching and sample hold. |
| 30 | LRCLK | O | *3 | *4 +5V |
| 31 | VDD | — | *4 | *5 Signal output for CDROM |
| 32 | SMP3 | O | *3 | *6 CDROM sync signal |
| 33 | SMP1 | O | *3 | |
| 34 | DFOUT | O | *3 | |
| 35 | DACLK | O | *3 | |
| 36 | DFIN | I/O | *5 | |
| 37 | LRSY | O | *6 | |
| 38 | MSBF | I | *3 | |
| 39 | CK2 | O | — | 2.1609MHz |
| 40 | AD10 | O | *7 | *7 RAM address output |
| 41 | AD10 | O | *8 | *8 Output state when WE = L and input state when WE = H. OE is for input/outptu control. |
| 42 | OE | O | *8 | |
| 43 | AD9 | O | *7 | |

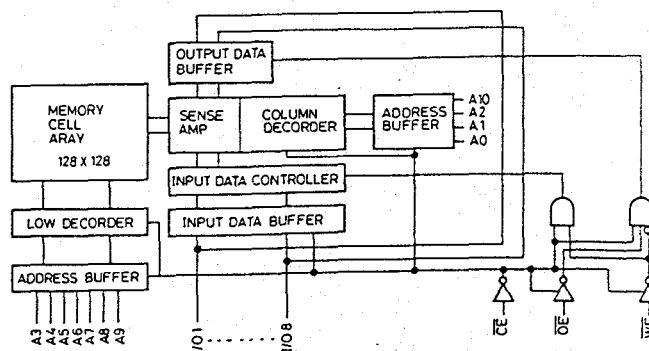| Pin No. | Pin Name | I/O | | Functions |
|---|---|---|---|---|
| 44 | AD8 | O | *7 | *7 RAM address output |
| 45 | AD7 | O | *7 | *8 Output state when WE = L and input state when WE = H. OE is for input/output control. |
| 46 | AD6 | O | *7 | |
| 47 | AD5 | O | *7 | |
| 48 | AD4 | O | *7 | |
| 49 | AD3 | O | *7 | |
| 50 | AD2 | O | *7 | |
| 51 | AD1 | O | *7 | |
| 52 | AD0 | O | *7 | |
| 53 | DB7 | I/O | *9 | *9 DB7 to DB0: connected to RAM data pins. |
| 54 | DB6 | I/O | *9 | *10 GND |
| 55 | DB5 | I/O | *9 | |
| 56 | Vss | — | *10 | |
| 57 | DB4 | I/O | *9 | |
| 58 | DB3 | I/O | *9 | |
| 59 | DB2 | I/O | *9 | |
| 60 | DB1 | I/O | *9 | |
| 61 | DB0 | I/O | *9 | |
| 62 | TEST4 | I | — | Test pin. Normally not connected. |
| 63 | TEST5 | I | — | |
| 64 | IOFF | I | — | For CD ROM. HIGH time interpolation and holding of previous value not performed. |
| 65 | EFLG | O | — | C1/C2 1-level and 2-level error correction |
| 66 | PW | O | — | PWSY is SYNC combining main and sub and change from HIGH to LOW is taken externally. The P, Q, R, S, T, U, V, and W subcodes are read by sending 8 clock pulses to SBCK. |
| 67 | PWSY | O | — | |
| 68 | SBCK | I | — | |
| 69 | FSX | O | — | 7.35kHz sync signal output |
| 70 | WRQ | O | *11 | *11 WRQ goes HIGH when data of subcode Q passes CRC check. This is taken externally and the data from SQOUT is read by sending CQCK. When data is required with LSB first, M/L is driven LOW. After the microprocessor sets RWC to HIGH, the command is given by output synchronized with the CQCK command data. |
| 71 | RWC | I | *11 | |
| 72 | SQOUT | O | *11 | |
| 73 | VDD | — | *11 | |
| 74 | COIN | I | *11 | |
| 75 | CQCK | I | *11 | |
| 76 | RES | I | *12 | *12 Goes LOW once when power is turned on. |
| 77 | M/L | I | *11 | |
| 78 | Vss | — | — | GND |
| 79 | XIN | I | — | Pin for connection to 8.6436MHz crystal oscillator |
| 80 | XOUT | O | — | |
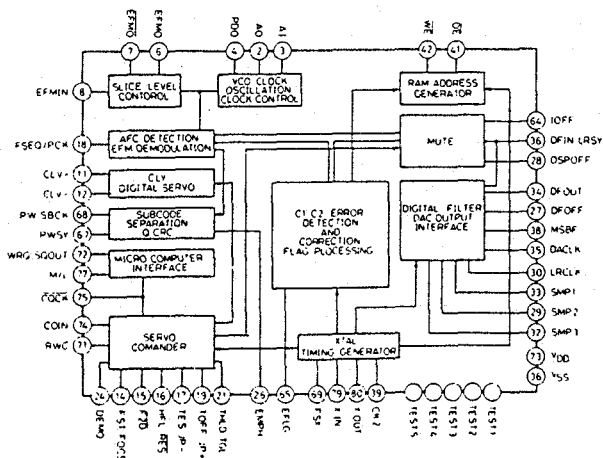


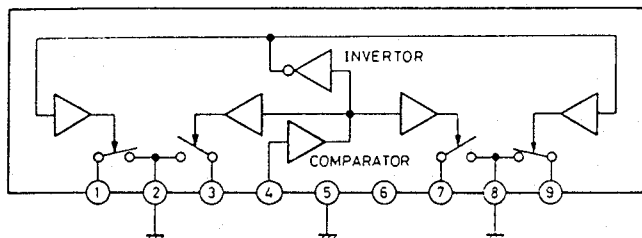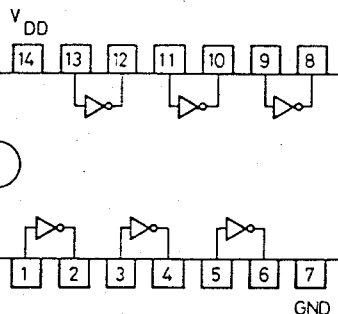## IC1402 LC3517A 3517 (STATIC-RAM)

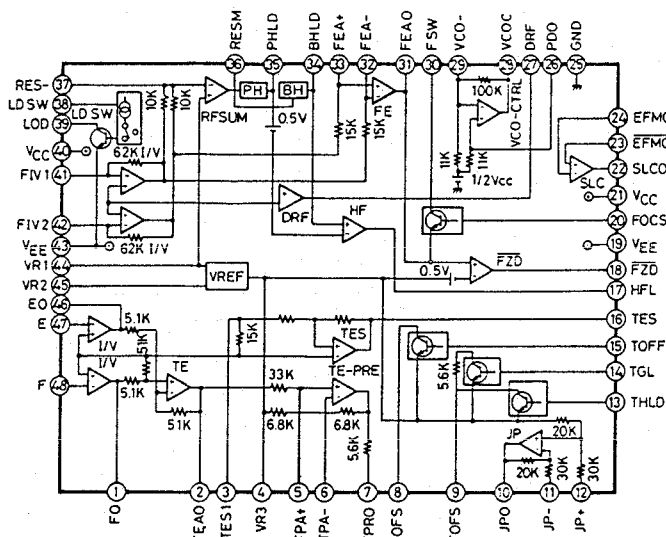## IC502 µPC1330HA (Cassette DEck 2-channel Head Select)



## IC001 LC4069UB(Hex Inverter)
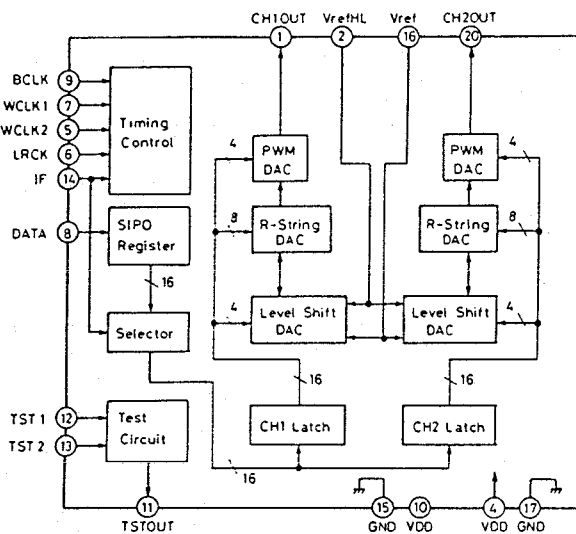
BLOCK DIAGRAM



## IC1101 LA9200NM (RF Amp. Servo)



## IC1501 LC7881 (16 Bit D/A Converter)



### Pins Functions of IC1501 (LC7881)

| Pin No. | Pin name (Symbol) | Description |
|---|---|---|
| 1 | CH1OUT | Output Terminal of CH-1. |
| 2 | VrefH | Input Terminal of Reference Voltage "H". |
| 3 | NC | No Connection |
| 4 | VDD | +5V Power Supply Terminal. |
| 5 | WCLK2 | Input Terminal of Word-Clock 2. When IF is in "L", internal signal for latching CH-1 data of digital signal is made by using trailing edge WCLK2. When IF is in "H", it needs WCLK2 to "L". |
| 6 | LRCK | Input Terminal of LR Clock. Indicates CH-1 and CH-2 of input digital audio data : indicate CH-1 when LRCK is in "H". indicate CH-2 when LRCK is in "L". |
| 7 | WCLK1 | Input Terminal of Word-Clock 1. When IF is in "L", internal signal for latching CH-2 data of digital signal is made by using trailing edge of WCLK1. When IF is in "H", internal signal for latching CH-1 and CH-2 data of digital signal is made by trailing edge of WCLK1. |
| 8 | DATA | Input Terminal of Digital Audio Data. When IF is in "L", digital audio data is input in bit serial from LSB. When IF is in "H", digital audio data is input in bit serial from MSB. |

| Pin No. | Pin name (Symbol) | Description |
|---|---|---|
| 9 | BCLK | Bit-Clock Terminal. This clock is for reading digital audio data into LSI in bit serial and is for PWMDAC. |
| 10 | VDD | +5V Power Supply Terminal. |
| 11 | TSTOUT | Output Terminal for Testing. Ordinarily, leave this terminal open. |
| 12 | TST1 | Input Terminal for Testing. Ordinarily, ground these terminals. |
| 13 | TST2 | Input Terminal for Testing. Ordinarily, ground these terminals. |
| 14 | IF | Interface Select Terminal. When IF is in "L", digital audio data is input from LSB side. When IF is in "H", digital audio data is input from MSB side. |
| 15 | GND | Ground Terminal |
| 16 | VrefL | Input Terminal of Reference Voltage "L". |
| 17 | GND | Ground Treminal |
| 18 | NC | No Connection |
| 19 | NC | No connection |
| 20 | CH2OUT | Output Terminal of CH-2. |

# LCD DISPLAY PIN DESCRIPTION

| No | COM1 | COM2 | COM0 |
|----|------|------|------|
| 1 | - | - | COM0 |
| 2 | COM1 | - | - |
| 3 | FM | LW | - |
| 4 | W | A | M |
| 5 | SW | - | - |
| 6 | 1(SW) | - | - |
| 7 | - | 2(SW) | - |
| 8 | 1(FM) | 2(FM) | - |
| 9 | 3(FM) | AUTO | - |
| 10 | 5b | 5c | - |
| 11 | - | 5adeg | - |
| 12 | 4f | 4b | - |
| 13 | 4e | 4g | - |
| 14 | 4d | 4c | - |
| 15 | . | 4a | - |

| No | COM1 | COM2 | COM0 |
|----|------|------|------|
| 16 | 3f | 3b | - |
| 17 | 3e | 3g | - |
| 18 | 3d | 3c | - |
| 19 | - | 3a | - |
| 20 | 2f | 2b | - |
| 21 | 2e | 2g | - |
| 22 | 2d | 2c | - |
| 23 | 5 | 2a | - |
| 24 | KHZ | MHz | - |
| 25 | FM MONO | - | - |
| 26 | - | .STEREO | - |
| 27 | 1f | 1b | - |
| 28 | 1e | 1g | - |
| 29 | 1d | 1c | - |
| 30 | ch | 1a | - |
| 31 | - | COM2 | - |

AUTO . STEREO

FM123 SW12 AMW LW

FM MONO MHz KHz CH

5 4 3 2 1

(segment labels: a f g b e c d)

IC301 LA3361 (PLL FM MPX, Stereo Demodulator)

Blocks: VCO, PHASE COMPARATOR, SYNCHRONIZING DETECTOR, FF 1/2, FF 1/2, FF, LAMP TRIGGER, REGULATOR, DEMODULATOR
Pin labels: (16) VCO ADJ, (15)(14) INPUT LEVEL (LOOP FILTER), (13) PHASE COMPENSATOR, (12) 19 kHz TP, (11)(10) CHARGE CAP, (9) FORCED MONO, (1) VCC, (2) MPX IN, (3) PHASE COMPENSATOR, (4) OUTPUT L, (5) OUTPUT R, (6) ADJ SEPARATION, (7) VCC, STEREO LAMP

IC903 LB1641 (Motor Driver)

Pin labels: P1 (3), OUT1 (2), VCC2 (8), OUT2 (10), P2 (9), VCC (7), Y2 (4), IN2 (6), IN1 (5), GND (1)
Blocks: Pre-Driver, Input Logic Circuit

| Input | | Output | | Action |
|-------|-------|--------|--------|--------|
| IN1 | IN2 | OUT1 | OUT2 | |
| 0 | 0 | 0 | 0 | Brake |
| 1 | 0 | 1 | 0 | Normal(Reverse)Rotary |
| 0 | 1 | 0 | 1 | Reverse(Normal)Rotary |
| 1 | 1 | 0 | 0 | Brake |

# VOLTAGES OF IC & TRANSISTORS

## IC101 (LA9200NM) (Unit: Volt)

| Measuring Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stop voltages | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.8 | 4.3 | 4.1 |
| Play voltages | -0.3 | Fluc | 0.2 | 0 | | | | | | | | | | | 0 | 3.8 |
| Measuring Pin No. | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Stop voltages | 4.1 | 4.0 | -5.0 | 0 | 4.9 | 3.6 | 1.5 | 1.5 | 0 | 2.4 | 2.4 | 0 | 0 | 0 | 0 | 0.6 |
| Play voltages | 0 | 4.0 | -5.0 | 0 | 4.9 | 2.5 | 2.6 | 2.4 | 0 | 2.4 | 4.16 | 2.5 | 2.4 | Fluc | -0.3 | 0.3 |
| Measuring Pin No. | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| Stop voltages | 0.6 | 0.2 | -0.2 | -0.1 | 0 | 4.2 | 5.0 | 5.0 | 0 | 0 | -5.0 | 0 | 0 | 0 | 0 | 0 |
| Play voltages | 0.3 | 0.8 | 2.9 | 1.7 | | 0.3 | -5.0 | 5.0 | | | -5.0 | | | | | |

## IC 1301 CXP5046H-225S

| PIN No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STOP VOLTAGE | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | - | - | - | - | 2 | 2 | 2 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 0.3 |
| PLAY VOLTAGE | 4.9 | 4.9 | 4.9 | 4.9 | 0.3 | - | - | - | - | 2 | 2 | 2 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 0.3 |

| PIN No. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STOP VOLTAGE | 0.3 | 0.3 | 0.3 | 0.5 | 0.3 | 0.3 | 0.3 | - | - | - | - | 3.0 | - | 0 | 4.5 | 0.2 | 0.2 | |
| PLAY VOLTAGE | 0.3 | 0.3 | 0.3 | 0.5 | 0.3 | 0.3 | 0.3 | - | - | - | - | 3.0 | - | 0 | 0.1 | 4.8 | 4.8 | |

| PIN No. | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STOP VOLTAGE | | 4.9 | 4.9 | 0 | - | 4.6 | 0 | - | 4.7 | 0 | - | 4.9 | 4.9 | - | - | - | - | - |
| PLAY VOLTAGE | | 4.9 | 4.9 | 0 | - | Fluc | 0 | - | Fluc | 4 | 0 | 0 | | | - | - | - | - |

| PIN No. | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
|---|---|---|---|---|---|---|---|---|---|---|
| STOP VOLTAGE | - | 0.1 | 0 | - | 0 | 0 | 0 | 0 | 0 | 4.9 |
| PLAY VOLTAGE | - | 3.2 | 3.2 | - | 3 | 0 | 0 | 0 | 0 | 4.9 |

## IC401 (LC7860N)

| Measuring Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stop voltages | | 2.5 | 2.4 | 2.4 | 0 | 1.4 | 1.2 | 2.5 | 0 | 4.9 | | | | 3.0 | 4.2 | 4.2 |
| Play voltages | | 2.5 | 2.4 | 2.4 | 0 | 2.4 | 2.4 | 2.5 | 0 | 4.9 | 0.8 | 0 | 0 | 3.0 | 4.2 | 4.2 |
| Measuring Pin No. | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Stop voltages | | 2.5 | 4.86 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0 | 2.5 | 4.9 | 2.0 |
| Play voltages | 4.17 | 2.5 | 4.86 | | | | | | | | | | 1.0 | 2.5 | 4.9 | 2.0 |
| Measuring Pin No. | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| Stop voltages | 1.0 | 2.0 | 2.4 | | 2.4 | 0 | 2.4 | 2.4 | 3.57 | 4.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| Play voltages | 1.0 | 2.0 | 2.4 | | 2.4 | 0 | 2.4 | 2.4 | 3.57 | 4.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| Measuring Pin No. | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| Stop voltages | 1.6 | 1.6 | 1.6 | 1.6 | 1.4 | 1.4 | 1.4 | 0 | 3.6 | 3.6 | 3.6 | 1.6 | 3.6 | | | |
| Play voltages | 1.6 | 1.6 | 1.6 | 1.6 | 2.6 | 2.6 | 2.6 | 0 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | | | |
| Measuring Pin No. | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| Stop voltages | 2.3 | | 0.3 | | 2.4 | 0 | | | 4.9 | | 4.9 | 5.0 | 0 | 0 | 2.3 | 2.3 |
| Play voltages | Fluc | | Fluc | 2.4 | 0.2 | Fluc | Fluc | 4.9 | Fluc | 4.9 | 5.0 | 0 | | | 2.3 | 2.3 |

※ Fluc: Fluctuation

## IC402 (LC3517AS)

| Measuring Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stop voltages | 2.4 | 2.4 | 2.4 | 2.4 | 1.6 | 1.6 | 1.6 | 1.6 | 2.5 | 1.4 | 1.4 | 0 | 3.6 | 3.6 | 3.6 | 17 |
| Play voltages | | | | | | | | | | 2.2 | 2.5 | | 2.6 | 2.6 | 2.6 | 2.4 |
| Measuring Pin No. | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | | | | | | |
| Stop voltages | 3.6 | 0 | 2.4 | 3.5 | 4.5 | 2.5 | 2.5 | 4.9 | | | | | | | | |
| Play voltages | 2.3 | | 2.4 | 3.5 | | | | | | | | | | | | |

| PIN No. | Q1101 | | | Q1201 | | | Q1202 | | | Q1203 | | | Q1206 | | | Q1501 | | | Q1502 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | C | B | E | C | B | E | C | B | E | C | B | E | C | B | E | C | B | E | C | B |
| STOP VOLTAGE | 4.98 | 0.5 | 4.98 | 0 | 0.3 | -0.6 | 0 | 0 | 0.6 | 0 | 2.2 | 0 | 0 | 0 | 0.6 | 4.0 | 4.9 | 4.7 | 1.3 | 5 | |
| PLAY VOLTAGE | | 4.86 | -4.98 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | 1.3 | 5 | 2 |

| PIN No. | Q1503 | | | Q1504 | | | Q1505 | | | Q1602 | | | Q1701 | | | Q1702 | | | Q7503 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | C | B | E | C | B | E | C | B | E | C | B | E | C | B | E | C | B | E | C | B |
| STOP VOLTAGE | 1.3 | 5 | | 0 | Fluc | 0 | 0 | Fluc | 0 | 0 | 5 | 0 | | | | | | | | | |
| PLAY VOLTAGE | 1.3 | 5 | 2 | 0 | 0 | 0.6 | 0 | 0 | 0.6 | | | | 4.9 | 2.8 | 1.8 | 4.9 | 2.8 | 1.8 | 4.9 | 2.8 | 1.8 |
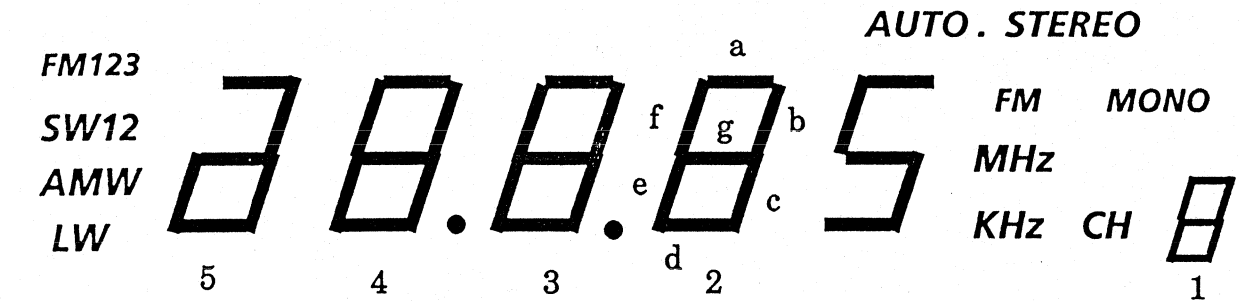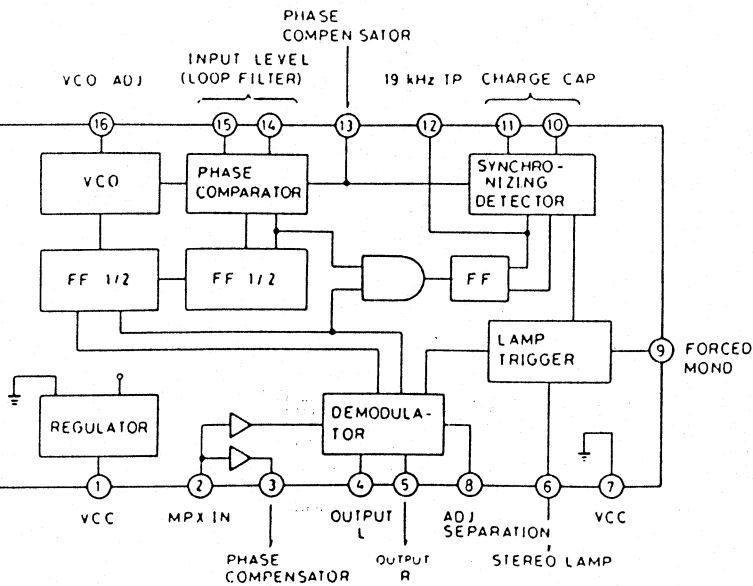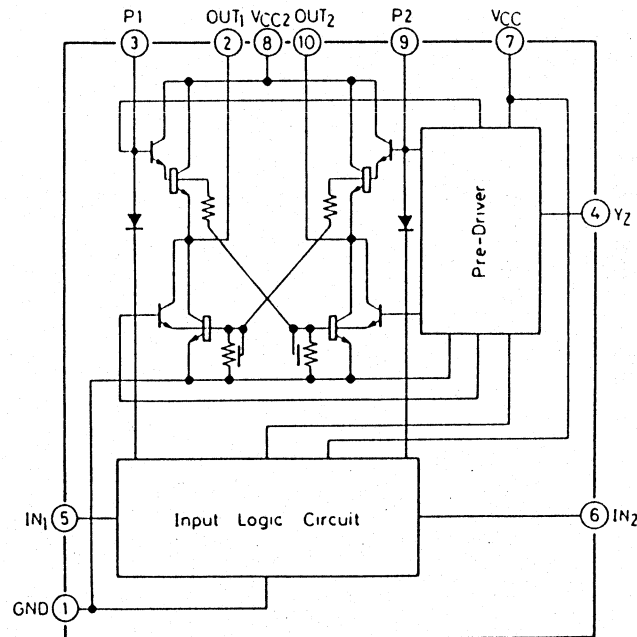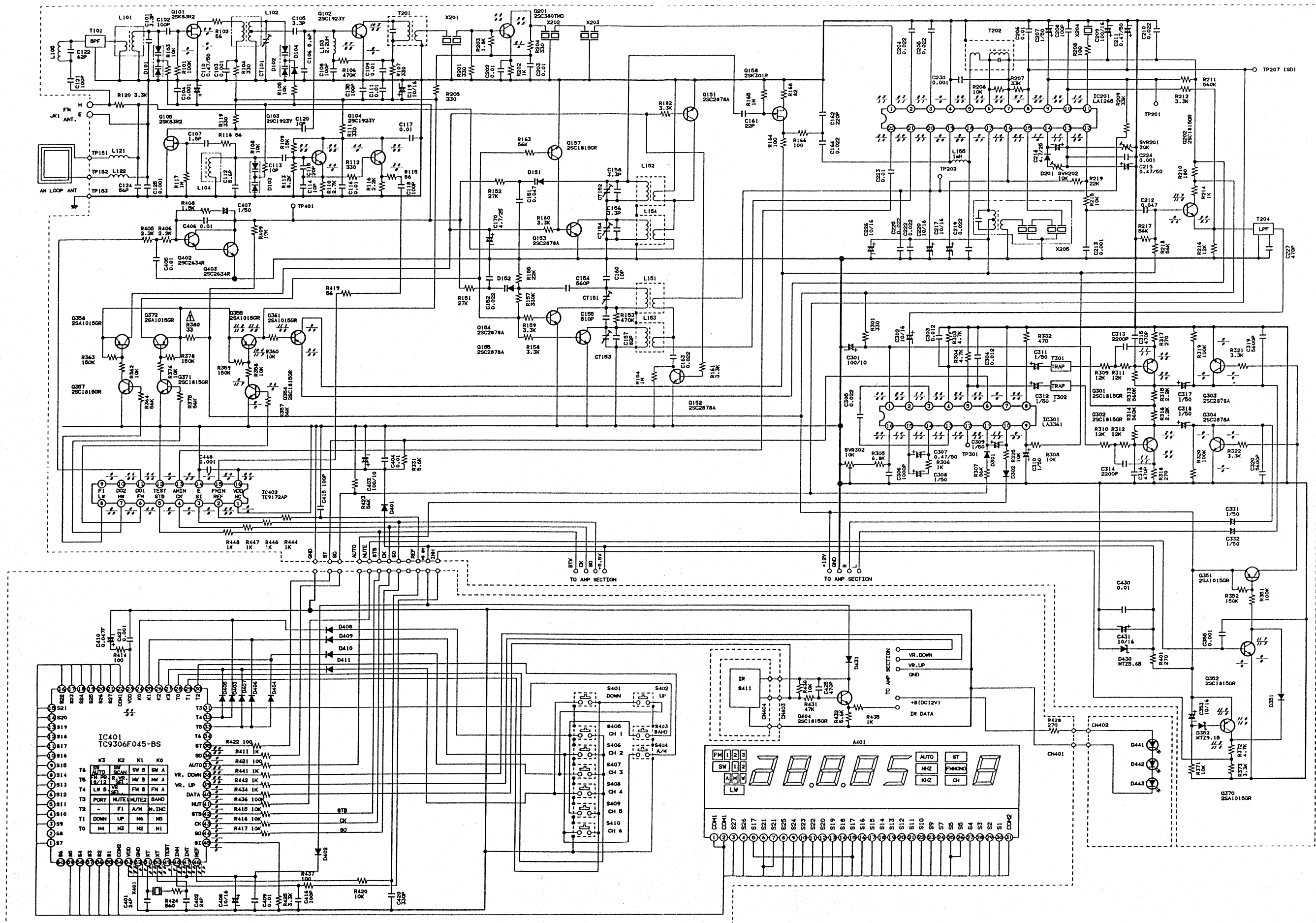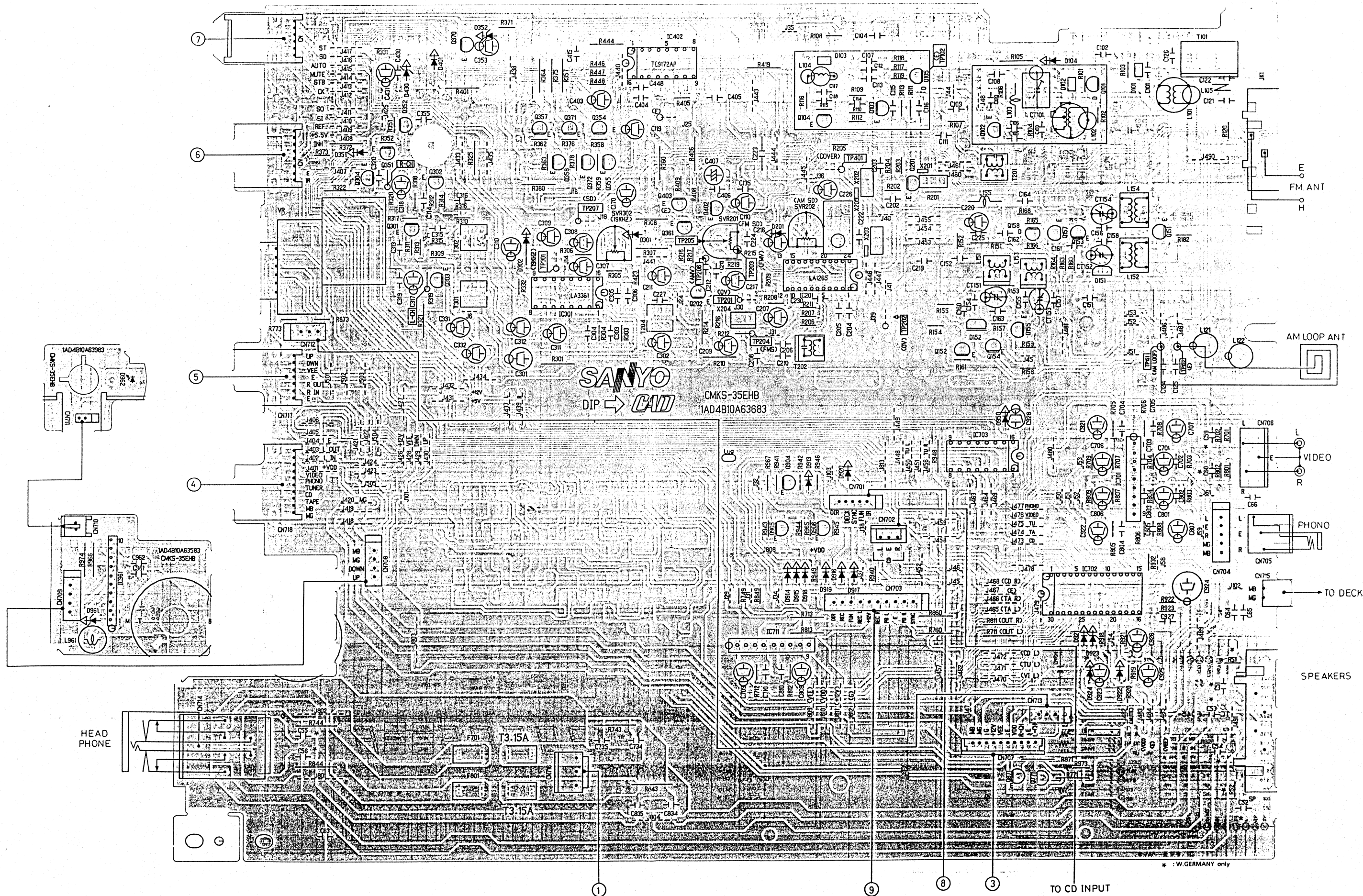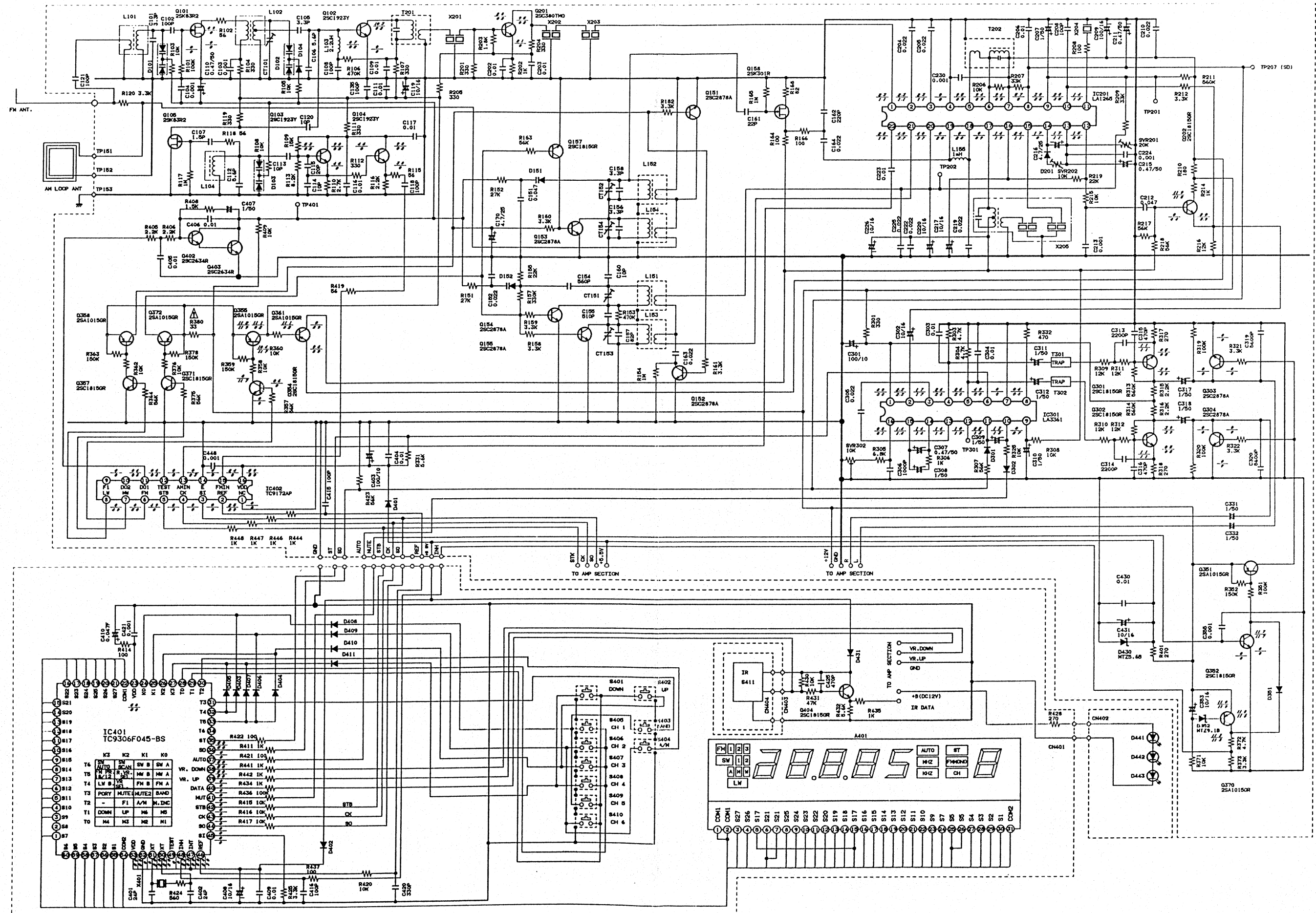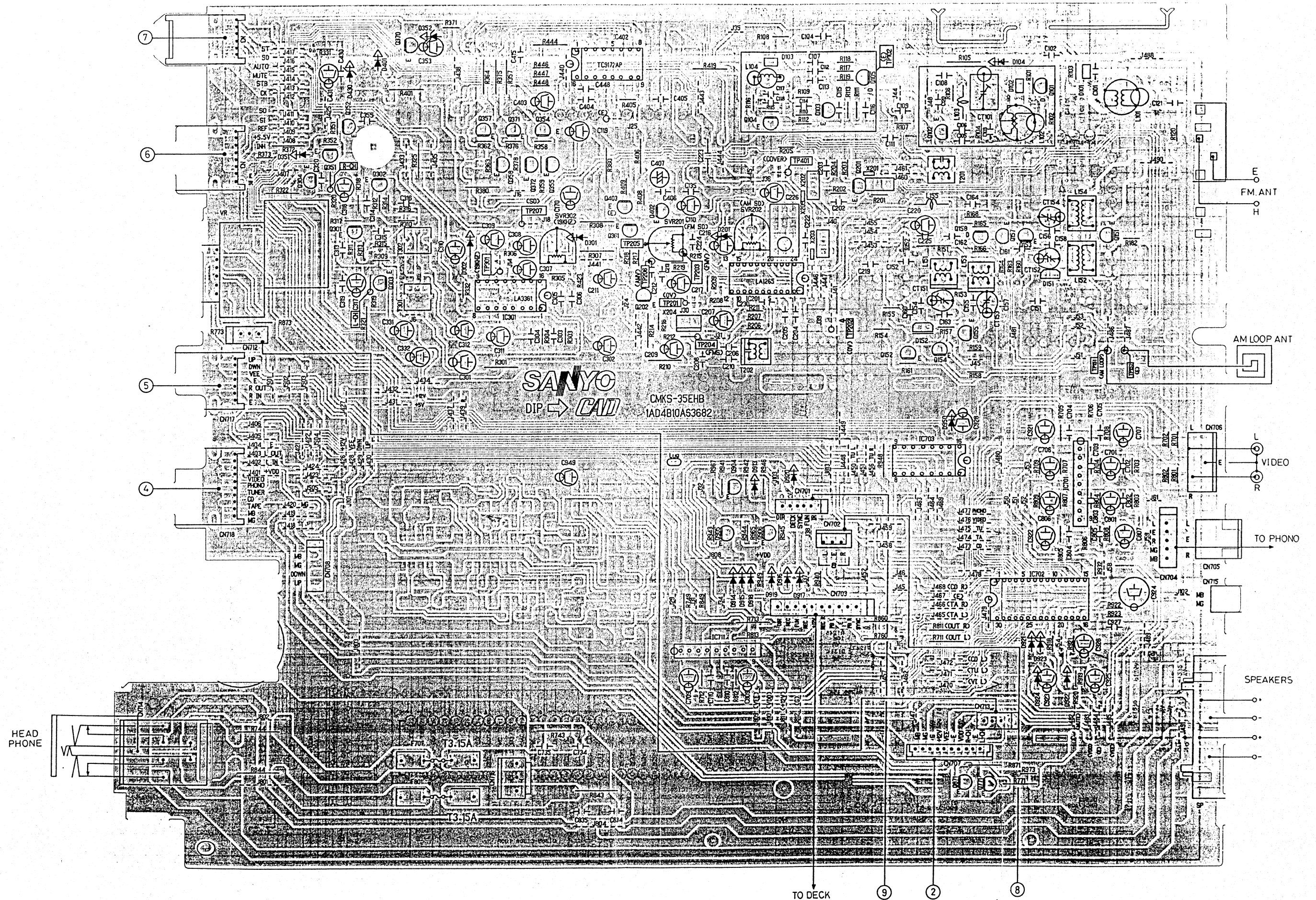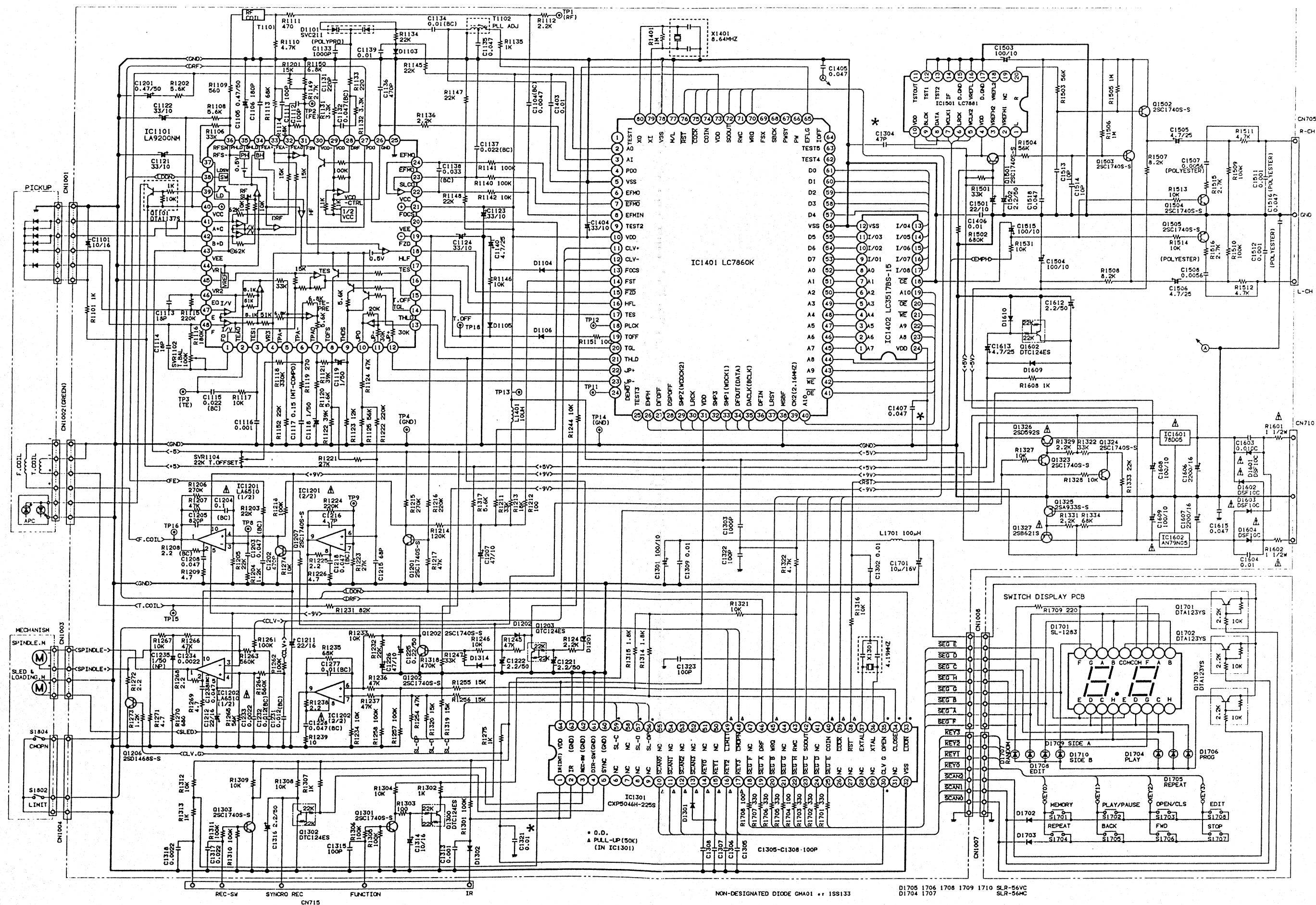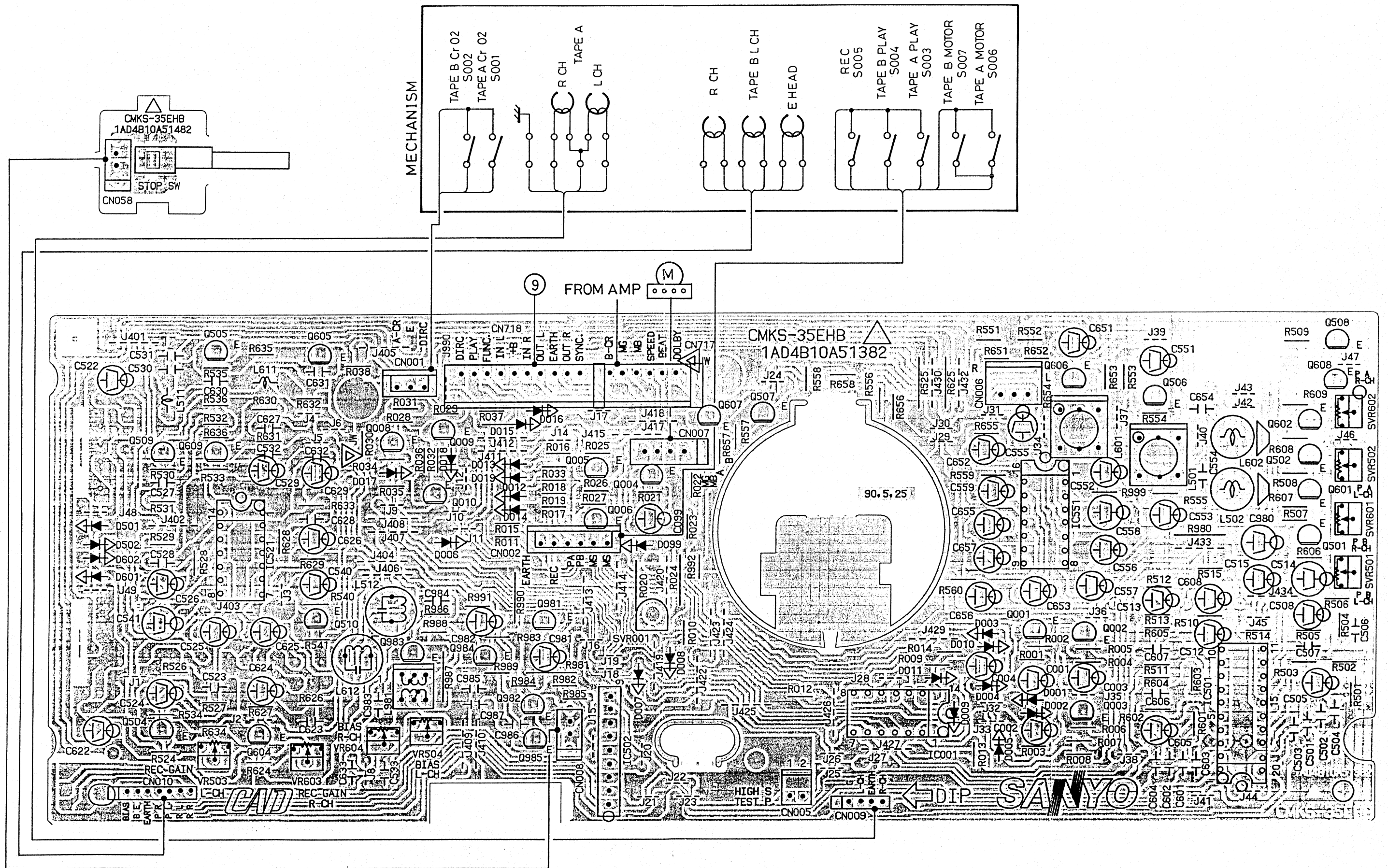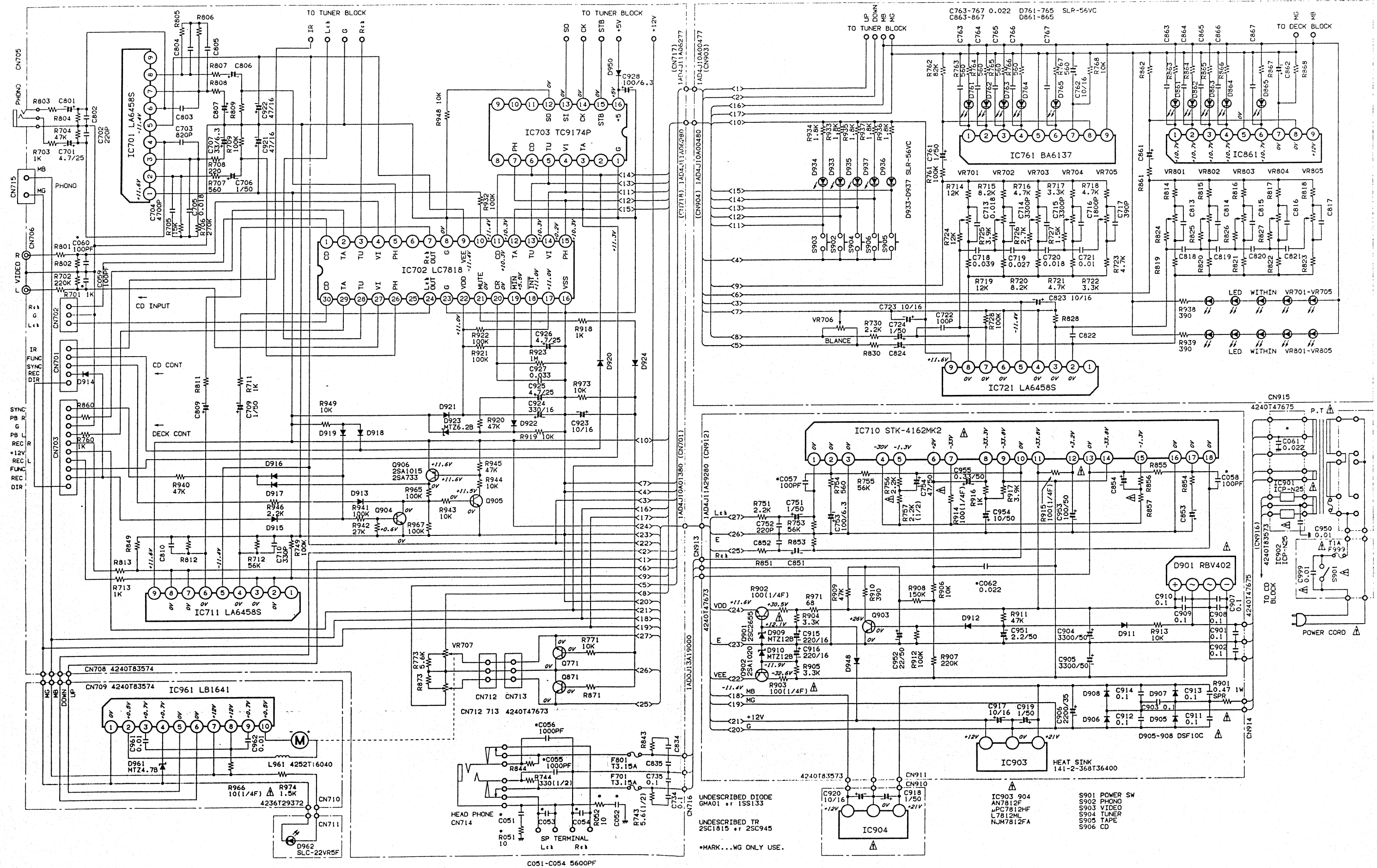
P.C.B Code
ITALY:
1AD4B10A63080 ~ 1AD4B10A63380
1AD4B10A63780, 1AD4B10A63880
1AD4B10A74280, 1AD4B10A74380
W. GERMANY:
1AD4B10A63083 ~ 1AD4B10A63383
1AD4B10A63783, 1AD4B10A63883
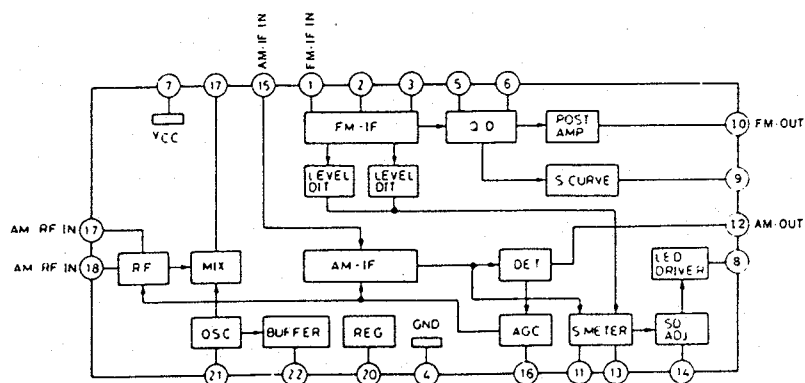1AD4B10A74283, 1AD4B10A74383

* : W.GERMANY only

TO CD BLOCK
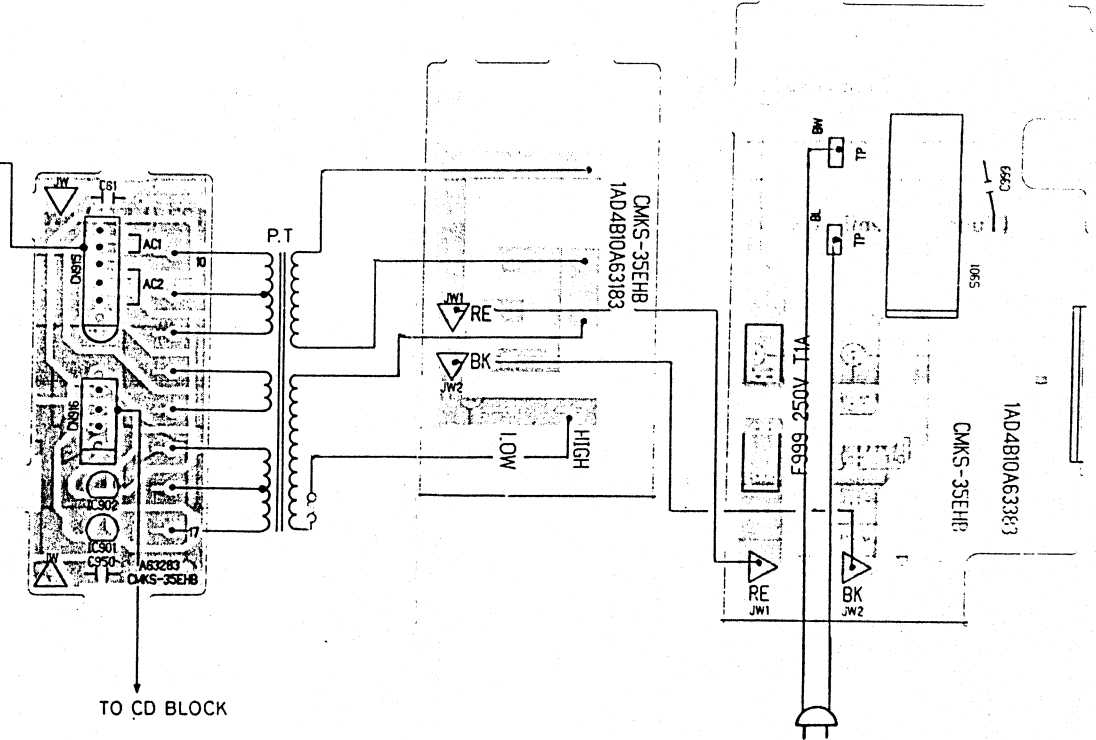
# IC BLOCK DIAGRAM

## IC1301 CXP5046H-225S(4 Bit Micro Processor)

| No | PIN NAME | DESCRIPTION | No | PIN NAME | DESCRIPTION |
|----|----------|-------------|----|----------|-------------|
| 1 | IR | Remote control signal input | 33 | LDON | LASER ON/OFF output |
| 2 | IR | Remote control signal input | 34 | CLOSE | Tray control motor output |
| 3 | REC_SW | Deck REC signal inpur(ON/OFF) | 35 | OPEN | Tray control motor output |
| 4 | DIR_SW | Deck REC REW/FWD signal inpur(A/B) | 36 | XTAL | Oscillator output |
| 5 | SYNC | SYNCRO REC signal output | 37 | EXTAL | Oscillator input |
| 6 | NC | (PULL UP) | 38 | RST | DRF input from LA9200N |
| 7 | NC | (PULL UP) | 39 | CQCK | Clock ootput to LC7860N |
| 8 | NC | (PULL UP) | 40 | SPRY | Open SW input(ON/)FF) |
| 9 | NC | (PULL UP) | 41 | POWER RY | PICK limit SW input(ON/OFF) |
| 10 | SCAN0 | KEY & Display SCAN output | 42 | SQOUT | SUBQ data input from LC7860N |
| 11 | SCAN1 | KEY & Display SCAN output | 43 | RWC | RWC output to LC7860N |
| 12 | SCAN2 | KEY & Display SCAN output | 44 | NC | |
| 13 | SCAN3 | KEY & Display SCAN output | 45 | WRQ | WRQ input from LC7860N |
| 14 | KEY0 | KEY input | 46 | DRF | DRF input from LA9200N |
| 15 | KEY1 | KEY input | 47 | NC | |
| 16 | KEY2 | KEY input | 48 | CMOPN | Open SW input |
| 17 | KEY3 | KEY input | 49 | LIMIT | PICK Limitte SW input (ON/OFF) |
| 18 | SEGF | LED display Segment output | 50 | NC | |
| 19 | SEGA | LED display Segment output | 51 | NC | |
| 20 | SEGB | LED display Segment output | 52 | NC | (pull up) |
| 21 | SEGG | LED display Segment output | 53 | NC' | (pull up) |
| 22 | AM | LED display Segment output | 54 | NC | (pull up) |
| 23 | SEGC | LED display Segment output | 55 | NC | (pull up) |
| 24 | SEGD | LED display Segment output | 56 | SL_OP | TRAY Control Motor output(SLED Motor) |
| 25 | SEGE | LED display Segment output | 57 | SL_O | TRAY Control Motor output(SLED Motor) |
| 26 | NC | | 58 | NC(SL_CP) | TRAY Control Motor output(SLED Motor) |
| 27 | NC | | 59 | SL_C | TRAY Control Motor output(SLED Motor) |
| 28 | NC | | 60 | NC | - |
| 29 | NC | | 61 | NC | - |
| 30 | CLV_G | CLV Gain control | 62 | NC | - |
| 31 | NC | | 63 | NC | - |
| 32 | VSS | GND | 64 | VDD | +5V |

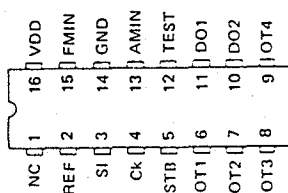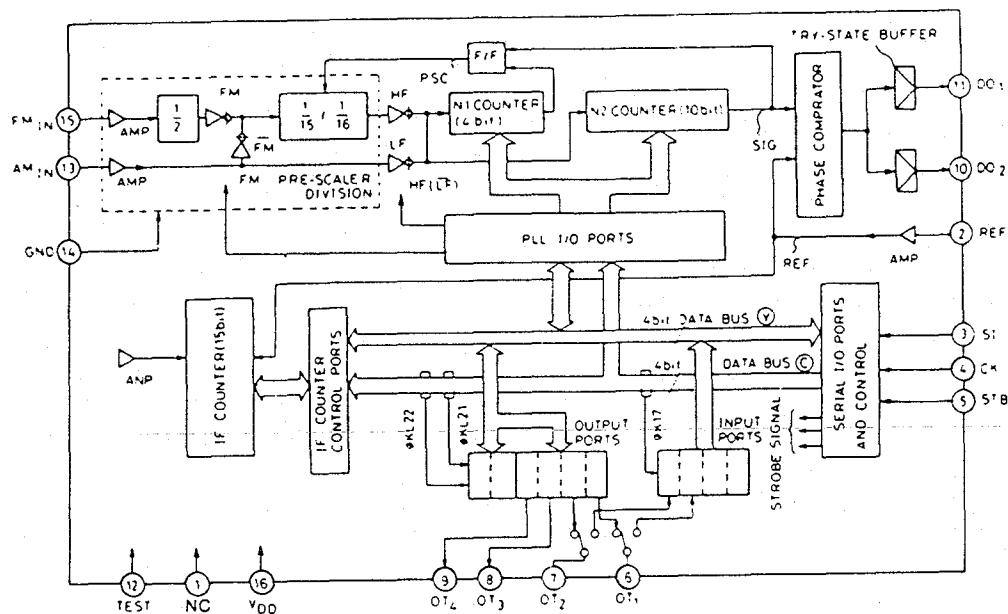### IC201 LA1265 (Tuner System)



### IC761,861 BA6137 (LED Level Meter Driver)
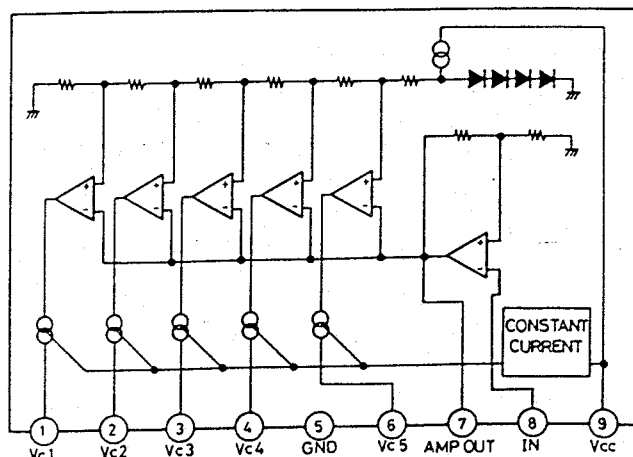
# IC BLOCK DIAGRAM

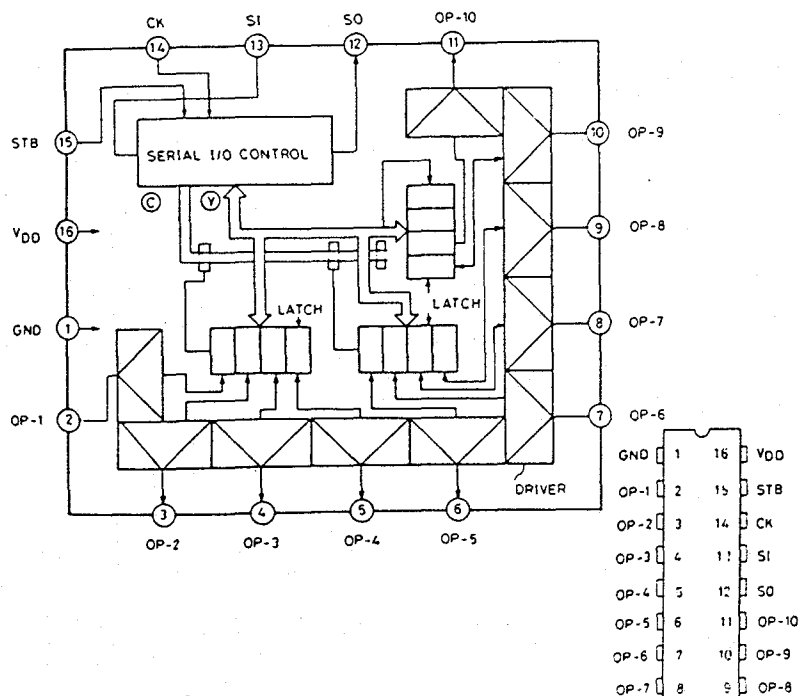## IC401 TC9172AP (HIGH-SPEED PLL WITH PRE-SCALER)



| TC9172AP | | | | | |
|---|---|---|---|---|---|
| PORT | NO | NAME | FUNCTION | ACTIVE | FIRST SETTING |
| OT 1 | 06 | FM | FM BAND OUTPUT | H | H |
| OT 2 | 07 | MW | MW OUTPUT | H | L |
| OT 3 | 08 | LW | LW BAND OUTPUT | H | L |
| OT 4 | 09 | F1 | F1 OUTPUT | H | L |
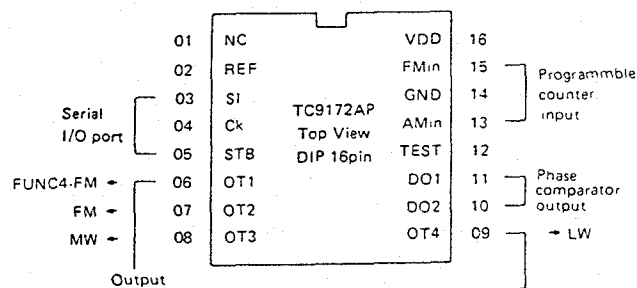
## IC703 TC9174P (INTER—FACE = EXTENSION OF I/O PORTS)



## IC551 CXA1101P (DOLBY B-TYPE NOISE REDUCTION)
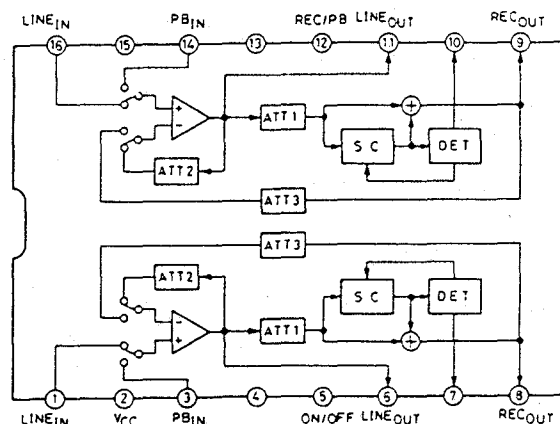


**SANYO**

SANYO Electric Co., Ltd.
Osaka, Japan

Aug./'90/1000 NS    Printed in Japan.

—E1—